

ISSUE
NUMBER
NINETEEN

Excavation SAFETY

GUIDE & DIRECTORY™



PIPELINE EDITION



Pipeline Association
for Public Awareness



Call or click before you dig

Call 811 or contact your local One Call System

Respect the marks

Flags, paint or other markers (normally yellow for pipelines)

Wait the required time

Generally 48 to 72 hours, depending upon state requirements

Excavate with care

Pothole or hand dig to determine exact location of pipelines

**Click
Before
You Dig**



Pipeline Safety Guidelines

Damage prevention is a shared responsibility. Digging safely begins with a call to your One Call System. Most state laws require this call, and it is normally free. Excavation information is then sent by the One Call System to operators of underground facilities near your excavation. The operators will mark the location of their facilities in accordance with the applicable state requirements. Emergency contact information should be obtained directly from the operator or from nearby pipeline markers.

Pipelines are an essential part of our transportation system. We depend on them every day to transport gas and liquid products to our homes and businesses. Pipeline companies perform ongoing maintenance to ensure the reliability of their systems. Local communities also play a vital role in keeping our Nation's energy infrastructure safe and secure. Individuals who observe any unusual conditions or suspicious activity near a pipeline facility should immediately report these to local law enforcement or the pipeline operator. Following these guidelines will help prevent pipeline emergencies and keep pipelines the safest method for transporting gas and liquid products.

Know the hazards

- Natural gas and other petroleum products will ignite and burn.
- If exposed to the skin, serious irritations may occur.
- Escaping gases can displace oxygen.

Recognize unsafe conditions

- Pipelines that are: leaking, damaged, insufficiently supported, exposed to high heat, or threatened by natural forces are all unsafe conditions.
- Any damaged or weakened pipeline must always be checked by the pipeline company for remaining strength. Even very minor damages can cause future leaks or ruptures and must be investigated.
- Pools of liquid, blowing dirt, hissing sounds, vapor clouds, gaseous odors, bubbles in standing water, dead vegetation and frozen soil or ice next to pipelines are all signs of a pipeline leak and should be treated as an emergency.

Respond immediately

- Immediately leave the area while avoiding any action that may cause sparks. Abandon all equipment and get a safe distance away.
- Call 911 and then immediately notify the pipeline company.
- Keep others away until emergency officials arrive. Stay upwind, do not attempt to operate pipeline valves or extinguish any pipeline fires.

Llame o haga clic antes de cavar

Llame al 811 o contacte su Sistema Una Llamada de su área

Espere el tiempo necesario

Generalmente 48 a 72 horas conforme a los requisitos estatales



Respete las señales

Banderas, pintura, u otras señales (normalmente amarillas para los gasoductos y oleoductos)

Excave con cuidado

Cave a mano para determinar el lugar exacto de los gasoductos y oleoductos

Guía de Seguridad de Tuberías

La prevención de daños es una responsabilidad compartida. Excavar con cuidado empieza con una llamada a su “One Call System” local. La mayoría de las leyes estatales requieren esta llamada y normalmente es gratis. Información sobre la excavación es enviada por el “One Call System” a los operarios de las instalaciones subterráneas que están cerca de su excavación. Los operarios marcarán el lugar donde tienen sus instalaciones en acuerdo con los requisitos estatales. Información sobre contactos de emergencia puede ser obtenida directamente del operario o de las señales en los gasoductos u oleoductos.

Las tuberías son parte esencial de nuestro sistema de transporte. Dependemos de ellas a diario para transportar productos de gas y líquido a nuestros hogares y negocios. Las compañías de tubería realizan mantenimiento para asegurar la confiabilidad de sus sistemas. Comunidades locales también pueden jugar un papel importante en mantener segura la infraestructura nacional de energía. Individuos que observen cualquiera condición inusual o actividades sospechosas cerca de facilidades de acueductos debe reportarlo inmediatamente a las autoridades locales o al operador del acueducto. Siguiendo las pautas antedichas ayudará a prevenir emergencias de tubería y garantizar que las tuberías son el método más seguro para transportar productos de gas y líquido.

Conozca los peligros

- Gas natural y otros productos petroléos pueden encenderse y quemar.
- Si expuesta a la piel, serias irritaciones pueden ocurrir.
- Gases escapados pueden desplazar el oxígeno.

Conozca las condiciones peligrosas

- Condiciones peligrosas son: gasoductos u oleoductos que tienen escapes, están dañados, el soporte es insuficiente, están expuestos a temperatura muy alta, o amenazados por las fuerzas de la naturaleza.
- Cualquier gasoducto u oleoducto dañado o frágil siempre debe ser revisado por la compañía que los dirige para determinar la resistencia restante. Incluso daños menores en los gasoductos u oleoductos tienen que ser investigados porque pueden causar escapes o rupturas en el futuro.
- Indicios de un escape en un gasoducto u oleoducto son: charcos de líquido, tierra soplada, sonido de silbidos, nubes de vapor, olores a gas, burbujas en agua estancada, vegetación completamente seca, y tierra congelada o hielo alrededor de ella. Todos estos indicios deben ser tratados como una emergencia.

Actúe de inmediato

- Aléjese del área inmediatamente y evite cualquier acción que pueda causar chispas. Abandone todo el equipo y manténgase a una distancia segura.
- Llame al número de emergencia 911 y luego de inmediato notifique a la compañía que dirige el gasoducto u oleoducto.
- No deje que otras personas se acerquen hasta que llegue el personal de emergencia. Manténgase contra el viento y no intente manejar las válvulas ni extinguir incendios en el gasoducto u oleoducto.



20
25

CONTENTS

2024 EXCAVATION SAFETY GUIDE & DIRECTORY



SCAN ME

View
this guide
digitally!

BEFORE YOU DIG

What you need to know and what you need to do before you dig.

- 6 Importance of White Lining
- 8 20 Years Later: The Impact of Online Ticket Entry
- 10 Pre-Excavation Checklist
- 11 The "Great Debate" - is Ditch Maintenance Considered Excavation?
- 12 Install Farm Drain Lines Safely
- 14 SUE and Vacuum Excavation

LOCATING & MARKING

The importance of accuracy in locating and marking buried facilities.

- 15 Understanding the Marks
- 16 Locate Requests: Covering the Basics
- 17 Pipeline Location Information
- 18 Who's Responsible for Getting Utilities Marked

DIGGING SAFELY

Technologies and techniques to stay safe and avoid damage.

- 20 Trenching and Excavation Procedures
- 22 How Can We Improve Excavation Safety with Fair Enforcement?
- 23 DIRT for Excavators
- 24 Safety When Trenching
- 26 True Cost of Pipeline Damages

WHEN THINGS GO WRONG

What to do in the event of underground damage.

- 31 Excess Flow Valves & Curb Valves
- 32 MarineSafe811 - How to Work Safely Near Underwater Pipelines and Utilities
- 34 Open Letter to HDD

FEATURING CURRENT PRACTICES AND TECHNOLOGICAL INSIGHTS FROM INDUSTRY EXPERTS!

RESOURCE DIRECTORY

A collection of invaluable information and access to resources.

- 36 Safety Training Videos
- 37 Know the Hazards
- 38 Leak, Hazard & Emergency Response
- 39 Changes to the Laws in Your State
- 42 Community Liaison Services / Enforcement Agencies
- 43 Notification and State Law Directory
- 50 Pipeline Operator Contact Directory
- 54 Resources for Excavators
- 55 Provide Feedback/Request Information

The **Excavation Safety Guide** is designed to be a reference for readers to use all year long. The articles are concise, to the point and focus on current industry trends and technologies. The resources include the CGA Excavation Best Practices, a complete Notification Center listing along with the state laws and provisions, a pull-out Emergency Response poster plus much more. Protecting the buried infrastructure is becoming more of a challenge every day and this guide will help you navigate through these challenges.

The Excavation Safety Guide Pipeline Edition is published annually by:

Pipeline Association for Public Awareness
8601 W Cross Dr PMB 302 Unit F5
Littleton, CO 80123-2200
www.pipelineawareness.org

Manufactured and printed in the United States of America. The contents of this publication may not be reproduced by any means, in whole or in part, without the prior consent of Excavation Safety Alliance, LLC.



FREE Excavation Emergencies Poster

LOOK ON PAGE 27 TO FIND YOUR COMPLIMENTARY PULL-OUT POSTER with complete information on how to recognize and respond to the hazards inherent in utility excavation.

Provided by Pipeline Association for Public Awareness

Connect with PAPA!



This manual is an informational and educational guide, but it is not intended to provide you with any definitive information regarding legal issues. You need to follow your specific state laws and OSHA rules. If you have any questions on issues raised in this guide, please consult with legal counsel and/or your state Notification Center.



SIGN UP FOR UPDATES



BE A GOOD NEIGHBOR & WHITE LINE

BY TODD GRIFFETH,
MANAGER OF DAMAGE
PREVENTION, COLORADO 811

When you think of being a good neighbor, what person comes to mind? For some it might be Jake from State Farm, or for us more seasoned Damage Prevention professionals, it just might be Mr. Rodgers or Wilson from Home Improvement. Regardless, I think both of their messages are somewhat the same. Good neighbors take care of each other!

So how do we apply being a good neighbor when it comes to white lining, either electronically or in the field?

As a good neighbor, the importance of white lining in excavation activities cannot be overstated. It's a practice that transcends the boundaries of construction sites, reaching out to neighboring properties and the community at large. By taking proactive measures like white lining before locator services, excavators not only enhance safety and efficiency but also demonstrate a conscientious attitude towards being a responsible member of the community.

“To be a good neighbor is to wonder how your words and actions will impact others rather than to wonder how you will be impacted. This is not to say that we should abandon personal safety or exhaust ourselves in unhealthy ways. Instead, we should build the faith to understand that when we are unselfish, our needs will also be taken care of.”

*-Megan Sanborn Jones on “Won't You Be My Neighbor?”
(BYU Professor and Chair of the Theatre and Media Arts Department)*

White lining simply means using white paint, flags, stakes (or any combination of these) to mark the outer edges of your dig site. It is a valuable form of non-verbal communication between you and the locate technician who marks the approximate location of buried utilities within your dig site. When you take the time to white line, it makes it much easier for the technician to focus work on the exact area of excavation and complete the job quickly so you can start your project.

Each type of buried utility is designated by a different color (using the APWA color code). The color reserved for proposed

excavation is white, hence the term “white lining.” Do not use other colors to indicate your dig area. Marks made should be made in dashes 1” wide, and 6”-12” in length. Each mark should be 4'-50' apart, depending on the scope of the dig area. Line-of-site is important when determining how far apart you make the marks. For smaller dig areas, you may choose to use dots of paint or place a white stake in the center of the dig area with a radius indicated from that stake.

Additional methods of white lining (where available through the 811 center) include electronic white lining. Electronic white



White lining demonstrates a respectful approach by clearly indicating the confines of the excavation area. This action prevents accidental encroachment onto neighboring properties, minimizing disruptions, and upholding the boundaries of shared spaces. It showcases an understanding of the importance of respecting the properties and spaces of others, fostering positive relationships within the community.

White lining aids locators by providing a clear demarcation of the intended dig site. This precision allows locators to focus efforts on the specific areas identified, allowing for increased productivity with an emphasis on accuracy. The result? Expedited processes that minimize disruptions and inconveniences caused to the neighborhood. By streamlining these activities, white lining contributes to a smoother and more efficient workflow, benefiting the entire Damage Prevention community.

lining provides a method where excavators may indicate their defined dig area visually by electronic data entry (lines or polygons) without the need for a physical site visit. Pre-marking, on-site and/or electronically, allows excavators to accurately communicate to the 811 center, facility owners/operators, or their locator where excavation is to occur.

The fundamental tenet of being a good neighbor involves looking out for the well-being of those in the vicinity. Effective white lining significantly contributes to safety. By outlining the intended excavation area clearly, excavators assist locators in precisely identifying underground utilities, reducing the risk of accidental utility damages. This proactive approach ensures a safer environment not just for workers but also for neighboring residents, minimizing the potential hazards associated with excavation work.

One of the cornerstones of being a good neighbor is respecting property boundaries.

The practice of white lining signifies a willingness to communicate and collaborate effectively. Excavators engaging in white lining procedures ensure that excavation boundaries are clearly communicated, fostering open lines of communication between contractors and locators. This transparent approach encourages understanding and cooperation among stakeholders involved, promoting a harmonious relationship within the community.

Underground utilities are shared resources serving multiple properties within

a neighborhood. White lining plays a pivotal role in protecting these vital resources. By accurately outlining the excavation area, excavators assist in safeguarding underground utilities, minimizing the risk of service disruptions for neighboring properties. Preserving these resources ensures the integrity of essential services, benefiting the entire neighborhood.

The practice of white lining in excavation activities exemplifies the qualities of being a good neighbor. It prioritizes safety, respects boundaries, enhances efficiency, fosters open communication and collaboration, and preserves vital shared resources. By implementing white lining procedures, excavators not only optimize their work processes but also contribute to creating a safer, more harmonious neighborhood for everyone.

So how do we tie this all together?

The industry has been tasked with and accepted the challenge, “50 in 5” campaign to cut damages to buried utilities in half by 2028. There is no doubt this is an uphill battle, especially with the increase and complexity of today’s locate requests. With the 2021 passage of the Infrastructure Investment and Jobs Act (IIJA) and slowdown in new home construction, regular lot type tickets have been replaced with extensive linear R.O.W. locate requests. With the industry still trying to manage the staffing shortage, now more than ever it’s time to have a call to action to be a good neighbor. Whether white lining is mandated by your local or state laws, consider the benefit if we all contribute and do our part. It is with true collaboration we will move the needle closer to our “50 in 5” goal.

What does being a good neighbor look like to you?

“ Meeting a deadline is crucial in utility locating. Mandatory white lining helps us meet those deadlines by giving us precise instruction on what area needs to be located so we can allocate the appropriate time and resources to that job.”

-Eric Wilke - Owner of Elevated Locating Services

YEARS
LATER:

The Impact of Online Ticket Entry

BY ADAM FRANCO, DIRECTOR OF
OPERATIONS, ONE CALL CONCEPTS (OCC)



When the first “call before you dig” centers were created, the idea of a user submitting their own tickets over the internet was nothing more than science fiction. Much like hoverboards and laser blasters, it was just a dream of what could be. While flying cars are still in development, internet-based ticket entry systems have become the standard for how excavators interact with today’s notification centers.

When ITIC was rolled out (One Call Concept’s first ever online ticket entry system) in 2003, it forever changed the way we look at ticket entry. When asked what it means for excavators in particular, David Butler, OCC’s national ITIC coordinator, shared:

From the excavator perspective, it provides

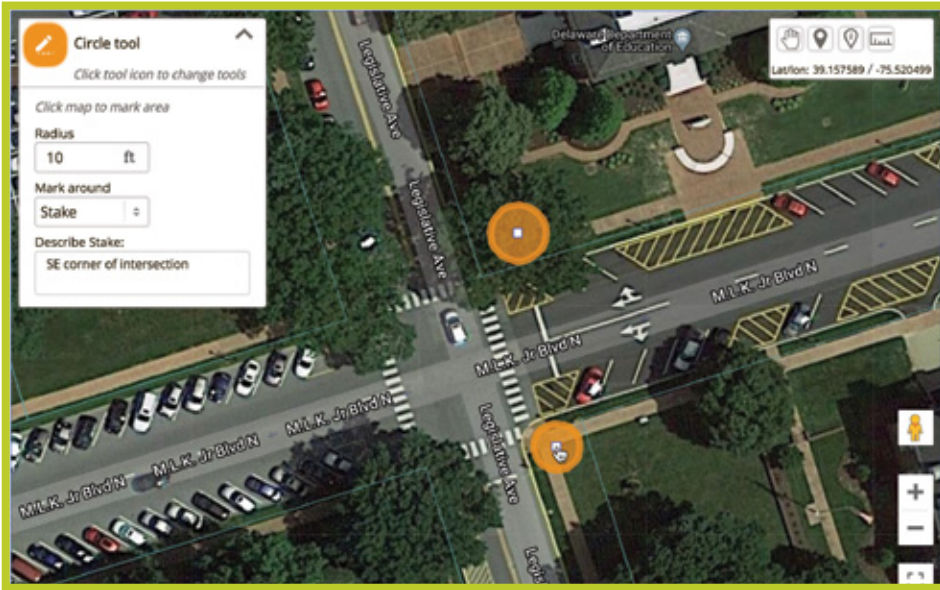
a better user experience and the increased accuracy needed for today’s projects. The system makes it quick and easy to process multiple tickets at once and features a variety of innovative mapping tools that streamline what has previously been a time-intensive task. It automatically populates much of the required location information – this not only saves time, but also greatly reduces the chance of human error.

Today, just 20 years later, we have seen many states go from 100% of tickets being called in to less than 20%. Having an online ticket entry system is no longer an option for notification centers – instead, it’s now the cornerstone on which our systems are built and an expectation from many excavators. Online ticket entry opened doors to new and exciting ways to improve the

excavator’s experience. In the beginning, only text was collected. The excavator would provide a text-based description of the work area, basic information, and the locate request was then passed to the notification center where the ticket was completed by center staff.

Mapping soon followed. In addition to filling out an online form, excavators could identify their worksite visually. No one knows where the work is taking place better than the excavator. Providing them with the power to identify the site has resulted in the smallest, most precise notification polygons possible.

Today, the excavator has nearly the same level of access as a customer service representative (CSR) in the notification



center. They have the power to create an entire ticket from start to finish, map the area with the highest possible accuracy, and send the ticket directly to affected facility operators.

Even more importantly, the excavator is no longer limited to drawing a polygon – they can now identify the site with such precision that some are describing it as “electronic white lining.” Excavators can identify their worksite by drawing a complex route, just like they would with white paint, flags, or stakes in the field. With the ITIC online ticket entry system, for example, they can draw a radius around a fixed object like a pole, hydrant, or meter. They can select a single parcel, or better yet – one quadrant of a parcel. And, as always, they can draw a freeform polygon to perfectly fit around their site.

Excavators around the country have found great value in these changes over time, and their feedback says it best. The following comments were shared by real online ticket entry users:

“I can do all of my jobs, then the system automatically knows how many tickets to file! Makes the process quicker and more efficient.” *Chester Jones, Intren Electric*

“I love how quickly I can put in multiple locations.” *Mark Enright, JBE Trenching*

It’s not just excavators who have benefited from the evolution of online ticket entry – locators and facility operators have experienced a significant impact through the reduction in over-notification. Online



ticket entry’s more precise excavation site mapping has led to facility operators being sent fewer tickets that do not require locating to be completed in the field (tickets outside of a facility operator’s coverage area). This has resulted in dramatic locating cost savings for facility operators, as the cost of receiving a ticket is negligible compared to the costs associated with physically responding to a locate request. More importantly, resources – including locators – can be better utilized where they are actually needed. Decreasing the number

of distracting, unnecessary tickets to facility operators and locators not only allows for a faster response, it allows for more energy to be focused on damage prevention and excavation safety.

The introduction of user mapping through online ticket entry quickly revealed that work areas drawn by the excavator are far more valuable than any text-based description can ever be. User-drawn maps allow facility operators to see exactly where the work is taking place, eliminating any room for misinterpretation. Every time OCC sends a ticket to a facility operator, the user-drawn map is delivered with the ticket. Locators can access a fully interactive map – with street and satellite views of the site – that shows the excavation polygon overlaid with incredible accuracy. Locators can use this to guide their response in the field, review and screen tickets from anywhere, and ensure they know exactly where the work is taking place throughout the entire process.

So while we still may be waiting on flying cars, we can rest assured that the Notification Center world has changed for the better with the introduction of online ticket entry. We have only just scratched the surface of what we can accomplish with these new tools over the past 20 years. As our technology continues to develop, all of our existing systems will continue to be enhanced – providing increased accuracy, faster ticket processing, and a better user experience across the board. **ESG**



Pre-Excavation Checklist

Before **EVERY** Excavation

Click
Before
You Dig



In the Office

- Review all drawings, plans, engineering blueprints for existing buried facilities
- Proposed excavation area has been marked in white paint and/or flags
- Call 811 at least 2-3 business days before excavation (check your state One Call laws)
- Locate ticket number is posted at the work location
- Onsite meeting scheduled with all high profile facilities in locate area (gas/oil pipelines, high-voltage cables, fiber optic)

Onsite

Complete a pre-excavation walkthrough of the entire jobsite and adjacent areas

Visually Inspect the Jobsite

- Signs or marking posts
 - Pavement markers (stamped nails, pavement decals, A-tags)
 - Surface markers
- Other surface signage for landscaped areas
- Locate marks
- Consult any maps or field sketches of the location
- Identify all services to buildings such as:

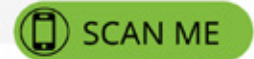
• Gas meters	• Electric cables
• Farm taps	• Water valves
• Pipeline valves	• Telephone closures
• Cable pedestals	
- Look for the evidence of trench lines from the previous excavation
- Look for the cleared pipeline ROWs
- Talk with the property owner or general contractor to identify potential private facilities that may not be marked:

• Lighting	• Sewer laterals
• Outbuildings	• Propane tanks
• Pools/Spas	• Communications lines
• Irrigation	

Document the Jobsite

- Compare actual jobsite to One Call ticket
 - One Call ticket covers the scope of the work
 - One Call ticket "Work to Begin" date is valid
 - All utilities have responded
 - All facilities are marked within the excavation area
- Photograph the jobsite
 - Locate marks and flags from 360°
 - Permanent signage and location relative to the dig area:
 - Note location, height, and operator of overhead lines
 - Note all required safety signage
 - Video and/or sketches where pertinent

Get more **FREE**
training tools
and safety
resources



Before You Dig

- Review safety information with anyone working the job
- Confirm with facility owner vacuum or hydro excavation is scheduled for all pipelines impacted
- Locations for hand digging within the tolerance zone are noted
- Emergency equipment available when hazardous atmospheres are potentially present
- List of all emergency contact numbers for assets in and adjacent to the dig zone is readily available
- The location and route to the nearest hospital is known by onsite supervisors
- When possible before any excavation, do a sweep with a locator to identify any foreign lines that are not marked
- Representatives for all critical facilities are present

This document is provided for informational purposes only and does not constitute professional advice. It is intended to be used as a guide in the development of a checklist specific to your situation and may not be inclusive of all pre-excavation activities required of your situation. Consult your company's appropriate management before implementation. Excavation Safety Alliance, its employees and agents accept no liability and disclaim all responsibility for the consequences of acting, or refraining from acting, in reliance of the information contained in this document or for any decision based on it, or for any consequential, special, incidental or punitive damage to any person or entity for any matter relating to the contents of this document.

THE MAINTENANCE and creation of ditches, whether for drainage or irrigation are critical tasks in both road construction and agriculture. These activities, which always involve some form of excavation, raise significant concerns about the safety and legal implications associated with damage to underground utilities, especially pipelines transporting hazardous materials such as gasoline, diesel, or natural gas to your local community.

Understanding Ditch Categories

Ditches are categorized into two types: road and agricultural. Agricultural

drastically. Some state laws say no, ditch cleaning or road grading is not considered excavation if you are not “changing the grade”. This is where the devil is in the details.

What about determining the original grade?

One challenge is determining the original bottom of a ditch, especially when using mechanical equipment. In cases where the ditch is not clearly marked or lined from the past, establishing the original grade becomes impossible to prove at times, and is a weak link for the excavator when it

implementing preventative measures, leading to the question - did you have a locate or not?

Opinion: Arguing over what constitutes excavation in the context of ditches seems fruitless. The use of mechanical equipment near ditches should always be accompanied by a locate request to ensure safety. The approach is not only a form of preplanning but also a free service acting as an insurance policy for the safety of all involved.

In conclusion, while state laws and definitions vary, the emphasis should be on

The “Great Debate” - is Ditch Maintenance Considered Excavation?

BY CLINT KALFELL, PROGRAM ADMINISTRATOR, MONTANA811



ditches require frequent maintenance due to the accumulated silt and vegetation, necessitating periodic removal to maintain the functionality.

Excavation and Legal Limitations

A key question typically arises regarding the removal of accumulated material in ditches. Does the process count as excavation, thereby necessitating a One Call notification for the identification of underground utilities that could be impacted by the removal of dirt and vegetation? State laws vary across the U.S.

comes to liability. Some state laws offer exemptions for certain types of agriculture excavations, but the ambiguity remains, such as when cleaning irrigation ditches.

Incidents and Responsibilities

There have been incidents where ditch cleaning, conducted without locating underground utilities, resulted in utility damage. These situations lead to hardships for the individual doing the digging (without a locate) when it comes to paying for the repairs. The real conflict is often who bears the cost of repair and

safety and precaution. A simple, proactive approach involving a locate request can prevent potential hazards and disputes, ensuring the safety of individuals and the integrity of the underground utilities and the services your community and neighbors count on. **EEG**

**DON'T BE THAT NEIGHBOR - ALWAYS
GET A LOCATE WHEN DOING
ANY EARTH-MOVING ACTIVITY,
ESPECIALLY DITCH CLEANING!**



Tile plow install.

Originally published in the 2023 PASA Farm & Ranch Excavation Safety Guide

Install Farm Drain Lines Safely

BY KAPIL ARORA, FIELD AGRICULTURAL ENGINEER, IOWA STATE UNIVERSITY EXTENSION & OUTREACH

SUBSURFACE DRAINAGE SYSTEMS are integral to farmland as they drain excess water from poorly drained soils. This excess water is conveyed by drain lines installed below the ground surface. Typically, a trencher or a plow is used to install drain lines. Drain lines are typically installed by excavating the soil to predetermined depths or by plowing them directly into the subsurface. During installation the equipment has the potential to contact buried utilities that may exist under the field.

Farmlands across the country have utility lines buried below the surface including natural gas, water, petroleum, electric, telecommunications, and several others. Utilities can run parallel to the road in a right-of-way or cut across a field.

Most aged drain lines in the Upper Midwest are getting upgraded by retrofitting or replacement while several farms are getting new systems installed. At the same time, the number of utilities crossing fields has

increased as utility providers plan and build to meet increased demand. These buried utilities present challenges to the safe installation of new, or upgrades to existing, subsurface drainage systems.

Safely installing subsurface drainage when utilities are present takes more effort than a call to 811 before you start to install. Safety begins several months in advance when the system is designed.

The design of a subsurface drainage system typically consists of locating and sizing three main components: an outlet, a main line to convey water to the outlet, and laterals to collect water from the field and convey it to the main line. Laterals are smaller than the main line and are installed across the field at known spacing and depth. The entire system functions by gravity to discharge the water through the outlet.

The location and size of the outlet, main line, and lateral can all be impacted by the

presence of buried utilities. These issues are best addressed during the planning and design phase.

Outlet

The outlet is typically the starting point for planning and design. Its location is influenced by its ability to convey the drainage water to a stream, roadside ditch, or a neighbor's system. Where enough grade is not available in the field, an outlet may be placed at the stream bottom. Lower elevation placement of an outlet can become a hindrance if utilities are buried along the stream edge or roadside. In such cases, it may be beneficial to alter the elevation of the outlet or to move it to a different location that does not cross the buried utility line. In cases where outlet locations are limited and moving it may not be feasible, working with the utility owner during the design phase to engineer a workable solution is an alternative.



Main Line

The main line is typically installed 5-8 feet below the surface but can be shallower or deeper depending upon field topography. Both the location and depth can be impacted if a buried utility, especially a pipeline, crosses the field. The presence of a pipeline marker is one indicator that a pipeline might cross the field.

It should not be assumed that pipelines are buried in a straight line from marker to marker. Markers merely indicate the approximate location of the utility. The potential exists that it is not installed in a straight line. It is essential that 811 is contacted during the planning phase to determine how the utility traverses the field. This information can be used when completing the drainage design. In some states, access to online utility maps for planning and design purposes is available through the One Call center.

Another factor to consider is the depth of the utility crossing the field. Excessive erosion of topsoil over time can cause significant changes in elevation. Such elevation changes may not be obvious as tillage operations may cloak them. In these cases, it can be helpful to make elevation measurements with an accurate measuring device such as a global positioning system or a transit. Installation of a drain line can be nearly impossible if it is close to,

or below, the pipeline depth. In such cases, it is helpful to plan a separate system on either side of the buried utility if multiple outlets are feasible. This minimizes crossing over or under the utility during drainage installation.

Working with the utility owner can help ensure crossovers or crossunders are properly engineered with no impact to buried lines. Engineers specializing in drainage designs can be employed to handle complicated issues and ensure safety and adequate drainage. Laterals can be planned in a similar manner.

Time lapse typically exists between planning and installation of a drainage system and can be significant if bottlenecks exist in neighbor relations or if specific county/drainage district approvals are needed. Any new utility line installations during this time lapse should be accounted for prior to installation of the drainage system.


811 should be contacted prior to installation to have utilities marked according to state law (usually 2-3 days). Utilities can require their presence if digging will take place within the tolerance zone or right-of-way. Tolerance zones are areas around buried utilities where digging with mechanized equipment is prohibited by state law.

Laterals

Connecting laterals to the main line

requires digging junction holes. Drain lines larger than 12-inch diameter are manufactured in fixed lengths and installation typically requires the digging of trenches to connect them. Outlet installations also require trenching or junction holes.

Trench safety can prevent personnel injuries or stuck equipment. Junction holes or trenches deeper than 4 feet may need to be widened at the top to prevent collapse. Check OSHA and local requirements as wall reinforcements may be needed depending upon the field conditions and the depth of excavation.

Planning a drainage system given the presence of pipelines may appear complicated but ignoring such details can result in significant time loss, damages, and potential injuries. Planning the drainage system by contacting 811 during the design phase can help minimize challenges during installation. Additional information about excavation safety can be obtained at PipelineAgSafetyAlliance.com or by contacting your state One Call center. 

Kapil Arora is a Field Agricultural Engineer with Iowa State University Extension and Outreach. He is the coordinator for the Iowa Drainage School. He can be reached at pbtiger@iastate.edu.

SUE AND VACUUM EXCAVATION HELP INCREASE SAFETY AND SAVE TIME

BY DUSTIN RHODES, PRODUCT
MANAGER, TRUVAC



When it comes to underground utilities, safety is paramount. As municipalities grow and various areas undergo advancement and development, the number of buried utilities grows. Likewise, the number of potential problem points grows, including more live and abandoned utilities interfering with new projects.

Subsurface Utility Engineering, or SUE, looks to counteract these pain points or at least decrease them through civil engineering, surveying and vacuum excavation. Greg Jeffries is the Chair of the Subsurface Utility Engineering & Investigative Committee at the American Society of Civil Engineers Utility Engineering and Surveying Institute (ASCE/UESI).

“SUE, to me, is the proper characterization of existing utilities and avoidance of utility conflicts,” said Jeffries. “Primarily SUE should be integrated in the early design process to give the design people the best foot forward. The idea is to give them very valid, precise information.”

In years past, SUE happened far into the process. It was a matter of finding out how bad an underground obstacle was rather than being used early in the design phase to help avoid surprises. SUE now considers not only utilities but also underground vaults and manholes to give a full-picture look at what is occurring in that underground space and show existing structures.

For example, in Tampa, Florida, when a

72” drainage trunk line was going to be put into an old cobblestone street, the underground structures in addition to the utilities caused issues. SUE showed the pipe wouldn’t work there, and the project would have been better served had SUE been utilized in the design stage.

“SUE as a whole isn’t about eliminating risk such as encountering utility issues, but rather it’s about drastically lowering the risk profile,” said Jeffries. “There’s a precision design when SUE is used, and it’s a buildable design.”

The vast majority of contracts put responsibility on the contractor to confirm all utilities. That puts every construction dollar at risk because there isn’t good subsurface information.

“All construction projects cost roughly 14% more than they should cost because of these unmitigated risk profiles that are being dealt with on the contractor side of the equation,” said Jeffries.

It’s not only a matter of cost and dealing with problems in the build phase rather than the design phase. It’s also a matter of safety. Digging into a utility creates a large safety risk. This is especially the case when working around natural gas lines.

“Safety is definitely the big consideration in SUE. It’s no question,” said Jeffries. “The more information we know about the utility installations that are out there, the more

we can avoid an unnecessary or unwanted interaction with that utility.”

That is one major reason why vacuum excavation is helpful when it comes to SUE. Rather using a shovel or backhoe to find out what lays beneath the surface, vacuum excavators use compressed air or pressurized water to uncover underground utilities. That loose soil is then vacuumed out of the way into a debris tank. This helps avoid any contact with utilities. The potholing technique also helps confirm the location, depth, and type of buried lines before construction begins.

Safety and risk avoidance are not the only benefits, though. Vacuum excavation also helps increase the speed of jobs because it identifies precise locations of utilities. Likewise, when SUE is incorporated in the design phase rather than the build phase, time is saved.

“SUE goes beyond safety in the idea of having a more functional design and buildable project,” said Jeffries. “We call it concept to concrete time. If I have a more complete design without unforeseen conflicts, that’s a much shorter window for building. That’s time and money and less traffic interruptions. There’s a number of factors that SUE provides answers to.” **ESG**

Excerpts taken from the Underground Infrastructure article titled, “Damage Prevention and Safety: SUE, Vac Excavation Increase Safety and Save Time”

COLOR CODE IDENTIFIERS

WHITE	Proposed Excavation
PINK	Temporary Survey Markings
RED	Electric Power Lines, Cables, Conduit, and Lighting Cables
YELLOW	Gas, Oil, Steam, Petroleum, or Gaseous Materials
ORANGE	Communication, Alarm or Signal Lines, Cables, or Conduit
BLUE	Potable Water
PURPLE	Reclaimed Water, Irrigation, and Slurry Lines
GREEN	Sewers and Drain Lines

Understanding the Marks: Locating and Marking Practices



Chapters from CGA Best Practices 19.0
For the complete Understanding the Marks:
Locating and Marking Best Practices,
See CGA Best Practices 19.0 at
[BestPractices.CommonGroundAlliance.com](https://www.bestpractices.commongroundalliance.com)

4. Locating and Marking

- 4.01 Available Records
- 4.02 Corrections and Updates
- 4.03 Color Code
- 4.04 Vacant
- 4.05 Locator Training
- 4.06 Safety
- 4.07 Visual Inspection
- 4.08 Facility Marking
- 4.09 Positive Response to Locate Request
- 4.10 Marking Multiple Facilities in the Same Trench
- 4.11 Abandoned Facilities
- 4.12 Locating Electromagnetically
- 4.13 Facility Owner/Operator Identification
- 4.14 Communication Between Parties
- 4.15 Documentation of Work Performed
- 4.16 Damage Investigation
- 4.17 Forecasting/Planning for Predictable Workload Fluctuations
- 4.18 Quality Assurance
- 4.19 Trenchless Excavation
- 4.20A Locating and Marking in Navigable Waterways
- 4.20B Locating and Marking in Navigable Waterways
- 4.21 Service Lines
- 4.22 Marking Newly Installed Facilities

FACILITY IDENTIFIER

CH	Chemical	E	Electric
FO	Fiber Optic	G	Gas
LPG	Liquefied Petroleum Gas	PP	Petroleum Products
RR	Railroad Signal	S	Sewer
SD	Storm Drain	SL	Street Lightning
STM	Steam	SP	Slurry System
SS	Storm Sewer	TEL	Telephone
TS	Traffic Signal	TV	Television
W	Reclaimed Water "Purple"	W	Water

UNDERGROUND CONSTRUCTION DESCRIPTIONS

C	Conduit	CDR	Corridor
D	Distribution Facility	DB	Direct Buried
DE	Dead End	JT	Joint Trench
HP	High Pressure	HH	Hand Hole
MH	Manhole	PB	Pull Box
R	Radius	STR	Structure (vaults, junction boxes, inlets, lift stations)
T	Transmission Facility		

INFRASTRUCTURE MATERIAL

ABS	Acrylonitrile - Butadiene - Styrene	ACP	Asbestos Cement Pipe
CI	Cast Iron	CMC	Cement Mortar Coated
CML	Cement Mortar Lined	CPP	Corrugated Plastic Pipe
CMP	Corrugated Metal Pipe	CU	Copper
CWD	Cresote Wood Duct	HDPE	High Density Polyethylene
MTD	Multiple Tile Duct	PLA	Plastic (conduit or pipe)
RCB	Reinforced Concrete Box	RCP	Reinforced Concrete Pipe
RF	Reinforced Fiberglass	SCCP	Steel Cylinder Concrete Pipe
STL	Steel	VCP	Vertrified Clay Pipe

LOCATE REQUESTS: COVERING THE BASICS

*Originally published in the 2019 Excavation Safety Guide

1 **Excavation Site Accuracy**
Clearly defining the excavation site is critical when requesting a locate. The precision of this information improves the locator's ability to provide accurate marks in the appropriate space. Describing the dig site eliminates confusion. Driving directions and GPS coordinates can save time for the locator - especially in rural, newly-developed or difficult-to-find areas. Pre-marking the area with white paint or flags ensures an onsite visual for areas that are difficult to describe on the ticket.

2 **Non-Members/Private Utilities**
Even if you call your Notification Center for every ground disturbance you undertake, you may still have unmarked facilities in your dig site. Laws vary between states and even municipalities on who is required to be a Notification Center member; and the ownership of many utilities transfer to the property owner at a specific demarcation point. For these facilities, a private utility locator is necessary to indicate their location. A few visual signs of private utilities on a dig site include utility meters, signs, markers, pedestals, hydrants, valve boxes, farm taps, regulators, lighting, or irrigation taps; especially if there is no paint or flags leading to them.

3 **Locate Longevity**
Each state has different laws governing when the ticket request should be submitted, how long the locate ticket is valid, how soon the work must begin, and what to do if the marks become illegible. It is important to know the law for the state you are working in. Review the Notification Center Directory beginning on page 51 for the law in your state.

4 **Second Requests: Remark/Refresh Requests, Incomplete Marks, No-Shows**
Requests for locates to remark the same location may be required for a variety of reasons. Normally these requests occur because the ticket expired before the project was completed, the initial marks were illegible or incomplete, one or more facility owners did not complete their marking within the required time or the marks were made but need to be refreshed due to activity at the dig site.

5 **Emergency Locates**
The exact definition of an emergency locate may vary, but this type of ticket is typically only allowed if there is a situation constituting an imminent danger to life, health, property, or a utility service outage, which requires immediate repair or action. It is a good idea to have a clear understanding of what qualifies in your state as an emergency locate before an emergency occurs.

6 **Onsite or Joint Meeting Requests**
An onsite meeting is scheduled when the scope of the work may be confusing or extends over a large geographic area. It is also useful when maps, plans, and schedules need to be shared. This type of meeting also allows excavators to discuss the project and any special circumstances with all concerned parties.

Held at the excavation site, or as close as practical, these meetings normally require more advance notice than a standard locate request. For jobs covering a large area, it is normally best to segment your request into reasonable sections. Identifying these sections on a map will facilitate communication between you and the locators, facility owners, and Notification Center. Notification Centers

often need very specific information about your excavation site to request joint meets, so be prepared before you call or click.

7 **Design Notifications**
Design notifications are done as a part of the development and preconstruction planning process to accommodate existing utilities and reduce problems during construction. Each state and/or facility owner will likely have specific policies on how these notifications are handled.

8 **Tolerance Zone**
The tolerance zone is a defined horizontal distance extending from either side of the outer edge of a buried utility. The exact distance of this tolerance zone varies from state to state, ranging from 18 inches to 24 inches on either side of the line or pipe, and is defined within the state's One Call law. To determine the tolerance zone for a given facility, you must know the state's law and the size of the utility. For example, in a state where the defined tolerance zone is 18 inches, the total size of the tolerance zone would be 38 inches for a two-inch pipe: 18 inches on either side of the pipe plus the two-inch diameter of the pipe itself.

CGA Best Practices call for the size of the pipe to be included in the locate marks on the ground, but caution should always be used when excavating within the tolerance zone as these indicators may be missing or incorrect.

Since locating equipment detects the electromagnetic field surrounding a pipe, and not the pipe itself, the science of locating underground facilities is not exact. The tolerance zone, therefore, serves as a warning to an excavator to proceed with care and caution while working in the area. Hand (or sometimes soft) digging is required within the tolerance zone. **ESG**

Pipeline Location Information

PIPELINE MARKERS

Pipelines are buried in areas called rights-of-way. Pipeline markers are used to designate the general route of the pipeline. Markers can also be found where a pipeline crosses a street or railroad, emerges from the ground, or in waterways.

BE AWARE: Pipeline markers will not designate the exact location, depth or number of pipelines in the area. Markers come in different shapes and sizes, but will always:



Include the word **WARNING, DANGER OR CAUTION**

Identify the material being transported

Provide a number to reach the company in event of an emergency

Provide the name of the pipeline company

Gathering pipelines are normally located in rural areas and transport crude oil or natural gas from wellheads and production facilities to processing facilities where the oil, gas and water are separated and processed.

Transmission pipelines move refined liquid products and natural gas from refineries to marketing and distribution terminals typically using larger diameter, high-pressure lines. The general location of all transmission pipelines can be viewed in the National Pipeline Mapping System at www.npms.phmsa.dot.gov

Distribution pipelines are normally located in populated areas and carry natural gas or propane from a transmission pipeline or storage facility directly to residential and industrial customers. Some companies have included the location of their pipelines in a mobile friendly web application called Pipelines Nearby, which can be accessed at www.pipelinesnearby.org

MARCADORES DE TUBERÍA

Las tuberías son enterradas en áreas llamadas derecho de paso (ROW por sus siglas en ingles). Los marcadores de tubería se usan para designar la ruta general de la tubería. Los marcadores también pueden ser encontrados donde una tubería cruza una calle o riel de tren, donde sale del suelo, o en vías navegables.

ESTÉ CONSCIENTE: Los marcadores no dan la ubicación exacta, profundidad ni número de tuberías en el área. Los marcadores vienen en diferentes formas y tamaños, pero siempre incluyen:



Incluye la palabra **WARNING, DANGER OR CAUTION** (aviso, peligro o precaución)

Identifica el material siendo transportado

Da el número de la compañía en case de emergencia

Da el nombre de la compañía de tubería

Tuberías **Recolectoras** están situadas en zonas rurales y transportan normalmente petróleo crudo o el gas natural de manantiales y de instalaciones de producción a centros de procesamiento donde se separan y se procesan aceite, gas y agua.

Las tuberías de **Transmisión** mueven productos y gas natural líquidos refinados desde refinерías a terminales comerciales y de distribución típicamente usando líneas de alta presión con diámetro más grande. La ubicación general de todas las tuberías de transmisión se puede ver en el sistema de trazado nacional de tubería en www.npms.phmsa.dot.gov

Las tuberías de **Distribución** están situadas en áreas pobladas y llevan normalmente el gas natural o propano de una tubería de transmisión o instalación de almacenamiento directamente a clientes residenciales e industriales. Algunas compañías han incluido la ubicación de sus tuberías en una aplicación web móvil llamada Pipelines Nearby, que puede ser accedida en www.pipelinesnearby.org



WHO'S RESPONSIBLE FOR GETTING UTILITIES MARKED, AND WHEN?

BY STEVE GIAMBRONE, PIPELINE DIVISION DIRECTOR,
LOUISIANA OFFICE OF CONSERVATION

I am writing this from the great State of Louisiana, where I work as the Pipeline Division Director for the Louisiana Office of Conservation. In addition to overseeing our Pipeline Safety Programs, I also am responsible for the implementation of the State's Damage Prevention Program (as it relates to pipelines). In 2022, I joined the CGA Best Practices Committee as one of the two NAPSR representatives and have been working with dredging and marine construction companies for years to improve marine safety when working around pipelines.

Since taking over damage prevention enforcement in 2018, we've made progress in Louisiana in both strengthening and enforcing our laws to bring down pipeline damages. In 2022, Louisiana's damage rate for pipelines was 2.7 damages/1000 tickets, which is down from 3.9 damages/1000 tickets in 2017. Additionally, Louisiana has passed laws requiring white lining, positive response, and potholing along with other minor changes to help clarify the law's intent.

But are you aware of the differences in laws from state to state when it comes to the damage prevention of underground utilities? Excavators (and utility operators) need to know and understand the laws in the state where they are working. Excavation laws are established at the state level and therefore, are not always consistent across state lines. Many excavation laws follow the Common Ground Alliances' Best Practices Guide, but even the guide may allow for deviations or provide a range for a Best Practice. As such, you will find differences in ticket life, tolerance zones, potholing (or daylighting) requirements, mark-by times and other standards commonly found in state "dig laws". Hopefully this article will help those who work across state lines to operate more safely, efficiently, and in compliance with state laws. Please understand that some of this information could be dated as states update their laws regularly, you must check the laws of the state you are working in.

MARK-BY TIMES

Let's start with "Mark-By" times. You've generally heard of the "48-hour rule" for a mark-by-time requirement, but not every state adopted the 48-hour requirement or if

"EXCAVATORS (AND UTILITY OPERATORS) NEED TO KNOW AND UNDERSTAND THE LAWS IN THE STATE WHERE THEY ARE WORKING. EXCAVATION LAWS ARE ESTABLISHED AT THE STATE LEVEL AND THEREFORE, ARE NOT ALWAYS CONSISTENT ACROSS STATE LINES."

they have, implements it in the same way. For instance, in Louisiana, the 48-hours granted to a utility operator to mark their facilities does not include weekends or holidays and the period doesn't start until 7:00 AM of the next working day. States such as Maine, North Carolina, and Wisconsin along with others have a waiting period of 3 days while Hawaii has a straight 5-day wait period (weekends and holidays included). Some states now allow excavators to choose their mark-by date and the Common Ground Alliance would like to see more states adopt this provision to provide for more efficient ticket management by utility operators.

TOLERANCE ZONES

How about Tolerance Zones? First, what is a tolerance zone? A tolerance zone does not mean I can't excavate within the area. Tolerance zones are generally a distance on either side of a mark where a utility may actually be located and the mark is still considered "accurate". In almost all states 18"-24" is the established tolerance zone. If I dig within that distance from either side of a utility marking, I should find the utility in question, right? Not always, as the distance is measured from the outside of the diameter of the utility. For a 20" pipeline, this means I have to add 10" on either side of the marking and then add the tolerance zone where the pipeline could be located. If the pipeline is located anywhere within that range, the mark is still "accurate". Now most states require "soft excavation" or non-mechanical excavation within the tolerance zone. Michigan has a 48" "Caution Zone". Before excavation activities can commence within this zone, pipelines must be exposed using soft excavation methods. More than 80% of states require soft excavation within the lawful tolerance zone.

TICKET LIFE

How long is my ticket good for? Did you

know some states allow for your ticket to be valid for as long as the marks are visible and your work is continuous (MA, MO, PA)? The CGA Best Practices Guide lists 10 days with a maximum of 20 days on a ticket life. The ticket life in most states ranges from 14 days to as much as 60 days, with 14-30 days being the most prevalent. Some states allow for deviations in the established mark by time, generally this can occur if the parties agree to extend the time for a utility to be marked; however, check the state's laws for whether or not the ticket life has been extended by extending the mark-by time. Just because you agreed to allow for a week to mark, does not necessarily mean the ticket life has been extended the same amount of time.

SECOND REQUESTS?

So, what's this all about? We don't have this requirement in Louisiana, but it's an interesting one. 16 states require an excavator to make a 2nd request if no response is received from an operator and there are signs of utilities but no markings. For instance, in Connecticut the excavator shall immediately request assistance from the public utility if the excavator has reason to believe there are underground utilities in the designated area, but no markings (16-345-4(c)(8)). While in Tennessee, the excavator shall not proceed until an additional notice is made to the Notification Center (65-31-108(d)). In Georgia, a second request must be made and the operator(s) has until noon of that business day. The excavator may start AFTER that time, provided there is no visible and obvious evidence of the presence of an unmarked facility. I'd say that's an important law for excavators to be aware of when working in Georgia (25-9-7(e)).

DOES EACH EXCAVATOR NEED A TICKET?

It is a fairly universal requirement that each excavator at a job site has their own

ticket, but four states do not require a separate request (Alaska, Georgia, Maine, and New Hampshire). In Louisiana, the person entering the ticket is allowed to add one excavator to the ticket.

ABANDONED FACILITIES

What do I need to do if I find what I suspect to be an abandoned facility? In many states, nothing at all. But some states have requirements for abandoned facilities, some for the operator and some for the excavator. In Alabama, for instance, if an excavator encounters an unmarked underground facility and attempts a follow-up (or second notice), all operators notified have four hours to contact the excavator with known active and abandoned facilities at the site (37-15-6(a)(40)). In Massachusetts, any facility that has been abandoned or is not in service shall also be marked if it falls within the safety zone of an active facility and shall further be marked to indicate its status as abandoned or not in service (220 CMR 99.606(F)).

There are other provisions in state dig laws to consider:

- **What do I do if I damage a utility?**
- **What about preserving marks?**
- **Does the state allow for exemptions from the law?**

We need to remember that these laws are there to ensure the reliability of critical services and for the protection of those working around utilities. Observing all aspects of the law will result in safe and efficient excavation and reduce delays and expenses. Taking shortcuts may seem tempting, but in the long run, they lead to damages, work stoppages, citations, and have negative impacts on worker safety. Let's all do our part in protecting our underground infrastructure. **ESG**

Trenching and excavating are often at the core of a robust construction site and require proper planning and adherence to best practices to ensure a safe and successful project. It can be among the most hazardous sitework operations. However, disciplined attention to safety standards and procedures can increase job site safety and minimize risk.

Over the years, the Occupational Safety and Health Administration (OSHA) has increased efforts to define threats and identify safe practices. The good thing is there are safety measures and systems that

Cave-ins are among the primary risks associated with trenching and excavating. Cave-ins account for the majority of incidents. Trench collapses, in particular, account for a significant amount. Besides cave-ins during excavation and trenching, you'll also need to pay attention to other potential issues, such as:

- **Hazardous atmospheres**
- **Falls**
- **Falling loads**
- **Incidents involving mobile equipment**

What's the best way to guard against these potential hazards?

For starters, never enter a construction site

Shoring necessitates installing supports such as aluminum hydraulic or other types to prevent cave-ins and soil shifting. Sloping refers to the technique of cutting back the trench wall at an angle inclined away from the excavation.

What about shielding?

It relies on trench boxes or other support types to avoid sediment cave-ins.

Benching refers to protecting employees from cave-ins by removing earth from the excavation sides to form one or more horizontal steps or levels. This technique usually involves vertical or near-vertical surfaces between levels. There's

TRENCHING AND EXCAVATING PROCEDURES WITH SAFETY CONSIDERATIONS

BY ANKIT SEHGAL, CHIEF EXECUTIVE OFFICER, SWIFTDRAIN



people in the field can implement to reduce these incidents altogether.

We define excavation as any human-made trench, depression, cut, or cavity involving earth removal. As for a trench? It's defined more specifically as a narrow underground excavation, deeper than wide. Trenches are, by definition, no wider than 15 feet. What kinds of safety considerations can they pose? Like excavation, they include everything from maintaining structural integrity to watching out for utility lines. Fortunately, a little knowledge can go a long way in supporting safe excavations and earth removal.

Trenching and Excavating 101: What to Watch Out For

When trenching and excavating, you must thoroughly understand the most significant risks these operations pose - whether you're working on installing a trench drain system, digging for utilities, or any other sitework project.

What is the most significant consideration in excavations?

without the proper protective gear, which includes a helmet, glasses, and vest. As for trenches, don't enter any that fail to have suitable protective systems in place.

Trenching and Excavation Safety Systems

A protective system should always be in place for commercial trenches five feet (1.5 meters) or deeper. You can only bypass this requirement when an excavated trench comprises stable rock. When trenches reach a depth of 20 feet (6.1 meters) or deeper, a professional must design their safety systems. This professional must be a registered engineer. You may also rely on tabulated data prepared or approved by such an expert.

What do these protective systems look like?

Different types of systems exist. They include:

- **Shoring**
- **Sloping**
- **Shielding**
- **Benching**

a caveat to benching, though. It cannot be used in Type C soils.

How to Select the Best Safety System

How do you know which safety system is right for your needs? This decision-making process can be a complicated one, involving considerations such as:

- **Depth of cut**
- **Soil classification**
- **Water content of the soil**
- **Changes due to weather or climate**
- **Other operations in the vicinity**
- **Surcharge loads (surcharge loads may include materials used in the trench or spoil)**

Soil Types Demystified

Soil types fall into one of two categories: granular or cohesive. Granular soils contain coarse particles like gravel or sand. As a result, the dirt doesn't stick together and will require more extraordinary measures to prevent a cave-in. Cohesive soil types include enough clay or fine particles so the individual particles stick together. As the name suggests,

cohesive soil remains less likely to cave in. Besides these essential characteristics, OSHA relies on a “unconfined compressive strength” measurement to categorize each soil type. Unconfined compressive strength refers to the amount of pressure it requires to collapse a specific soil type. Soils are classified as follows:

- **Stable rock**
- **Type A**
- **Type B**
- **Type C**

Let’s explore each soil type in greater detail. That way, you’ll develop a better sense of safe and dangerous working conditions.



Daily Inspections by a “Competent Individual”

Inspections must occur before workers enter the excavation area or trench. This step eliminates the risk of excavation hazards listed above. Who does OSHA define as a competent individual? An individual capable of identifying predictable and existing hazards or working conditions that are considered unsanitary, dangerous, or hazardous to workers. Tasks performed by a competent person include:

- **Testing and classifying soil**
- **Inspecting protective systems**
- **Monitoring water removal equipment**
- **Designing structural ramps**
- **Conducting site inspections**

This individual should be authorized to take speedy action and corrective measures to mitigate potential conditions and hazards.

Understanding Access and Egress Points

Your designated “competent individual” will also regularly inspect excavations and trenches to ensure safe access and egress to all excavations. These access and egress points may include:

- **Steps**
- **Ladders**
- **Ramps**
- **Other secure means of exit**

Access and egress safety guidelines apply to all trenches four feet (1.22 meters) or deeper. Means of entry and escape must lie within 25 feet (7.6 meters) of employees.

OSHA Trench Safety Rules

What else does OSHA recommend to

keep employees safe while working in excavations and trenches? OSHA Trench Safety Rules include:

- **Maintaining surcharge loads a minimum of two feet (0.6 meters) away from trench edges**
- **Keeping heavy equipment away from trench edges**
- **Knowing where all underground utilities are located**
- **Testing for low oxygen, toxic gases, and hazardous fumes**
- **Inspecting trenches at the beginning of each shift**
- **Never working under raised loads**
- **Inspecting earthworks after rainstorms and other precipitous weather**
- **Inspecting the trench after any occurrence impacting conditions in the excavation or trench**
- **Ensuring that all personnel wear high visibility or suitable clothing when exposed to vehicular traffic**

By following the guidelines above, you’ll ensure the safest working conditions for all employees on the jobsite. Besides following these rules, you must also incorporate pre-planning into all potential jobs.

What Is Pre-Planning?

Whether your construction company has one year of experience or two decades in trenching, backfilling jobs, and shoring, approach each new job with meticulous preparation and care. What’s the root of most on-the-job accidents? A lack of initial planning. In other words, don’t wait until stepping into the dirt to figure out the best safety system for an excavation or trench. After all, making adjustments to fix sloping and shoring issues will hinder operations, slow progress, and increase labor costs. Putting a band-aid on potential safety issues increases the likelihood of an excavation failure or cave-in over time. With that in mind, let’s review the safety factors you must consider before bidding on a job.

Safety Factors to Consider Before Bidding


Before you even start preparing a bid, you must understand safety issues at the jobsite. You’ll also need to know about the materials and equipment your employees need on hand to comply with OSHA safety standards. The following safety checklist

will help you evaluate each job site and then draw up a plan accordingly. Factors you must consider include the following:

- **Proximity and physical condition of nearby structures**
- **Traffic**
- **Soil classification**
- **Ground and surface water**
- **Location of the water table**
- **Underground and overhead utilities**
- **Quantity of protective systems or shoring that may be required**
- **Weather**
- **Fall protection needs**
- **Number of ladders needed**
- **Other equipment needs**

Which processes can help you collect the information you need? They include taking test borings for soil conditions and types, observations, jobsite studies, consultations with utility companies, and meetings with local officials. This research will help you determine the kind, amount, and cost of safety equipment needed for your workers to do their jobs properly, safely, and more cost-effectively.

Promoting Excavation at Your Workplace

Trenching and excavation are among the two most dangerous activities at construction sites. For this reason, you must plan for both with a detail-oriented approach. OSHA lays out a comprehensive system of regulations to help you ensure the safety of your workers. From employing a competent person at your jobsite to understanding soil types and safety system implementation, these precautions translate into a safer workplace. Besides following these guidelines, you must consistently monitor for changing conditions. After all, exposure to vibrations or precipitation can lead to changing soil conditions and the need for different safety systems. Fortunately, with the proper skill set and approach, one can significantly prevent incidents, minimize risk, and effectuate site operational safety. 

Ankit Sebgal is the Chief Executive Officer at Swift Drain, an American trench drain manufacturing company. He has worked on infrastructure improvement projects for the United States Air Force, the U.S. Department of Energy, and the Department of Transportation. For more information, visit swift drain.com.

TOWN **ESA** HALL

EXCAVATION SAFETY ALLIANCE

Originally published in the 2023 Winter Excavation Safety Magazine.

How Can We Improve Excavation Safety with Fair Enforcement?

Moderator: Scott Landes, Excavation Safety Alliance

Panelists:

- Stephen Allen, Energy Worldnet
- Shane Ayers, Stake Center Locating
- Kemp Garcia, LineScape of WA & NUCA of Washington
- Steven Giambrone, State of Louisiana
- John Hass, VEIT
- Chad Mathiowetz, Mathiowetz Construction Company



Scott Landes

On August 10th, nearly 90 industry stakeholders converged for an insightful discussion centered around the existing challenges and promising avenues for improvement in enforcement.

Kicking off the Town Hall, Scott Landes posed a fundamental question that captured the essence of the Town Hall: How is enforcement structured across states, and does it offer equitable treatment for all stakeholders involved?



Shane Ayers

Shane Ayers offered an insightful perspective. He shared that for an enforcement process to be deemed fair and effective, it's imperative to create a holistic system. In his words, *“all stakeholders that participate in damage prevention have to be involved in the enforcement recommendations.”* His call for unity laid emphasis on the indispensable role of excavators, utility locators, One Call centers, DOTs, and PUCs. Such inclusivity would not only foster fairness but also significantly ramp up efficacy in addressing excavation-related concerns.



John Hass

Delving deeper, it was highlighted that some enforcement programs operate primarily on a complaint-based system. The potential consequences of such a system can include delayed problem resolution and potential safety risks due to reactive rather than proactive issue management. John Hass also shed light on a crucial underlying issue – the inaccuracies rampant in mapping data. He underscored this by stating that *“poor mapping is often the root cause of many excavation damages.”*



Stephen Allen

The conversation transitioned to a vital question: why is there a strong emphasis on enforcing gas utilities over others? Stephen Allen pointed out that while proactive measures have significantly reduced damages to gas lines over the years, there's a noticeable disparity when it comes to other utilities. The heightened risks associated with damaging gas utilities certainly warrant attention, but a comprehensive approach is needed to ensure the protection of all utilities.



Kemp Garcia

Kemp Garcia shared success stories, emphasizing that collective team initiatives can gain legislative backing. By joining forces, presenting cohesive strategies, and supporting proposals with solid data, they managed to capture the attention of policymakers.



Steven Giambrone

Steven Giambrone highlighted a significant disparity in the current system, pointing out that while excavators face a myriad of regulations, utilities often have an easier path. Such an imbalance emphasizes the need for a regulatory overhaul to ensure fairness for all parties involved.



Chad Mathiowetz

Chad Mathiowetz spotlighted Subsurface Utility Engineering (SUE) as a pivotal tool. By advocating for its use, he stressed that SUE could help ensure utilities are installed correctly, thus potentially reducing excavation-related issues in the future.

In essence, this Town Hall was a melting pot of ideas, experiences, and visions. It underscored the pressing need for collaborative efforts, innovative solutions, and revisited regulatory frameworks. For every professional involved in excavation, this discussion offers valuable insights, presenting both challenges to ponder and solutions to explore. **ESM**



If you missed the live discussion or wish to soak it in once more, the full Town Hall can be found by scanning the QR code or at the YouTube channel @excavationsafetyalliance.

If the Common Ground Alliance's (CGA) goal of reducing damages by 50% over the next five years is to be achieved, unprecedented collaboration across the industry is required, with each stakeholder group taking ownership and committing to necessary improvements.

Excavators play a critical role in this effort. Doubling down on safe work practices and proper use of 811, expanded enforcement, and education programs are essential.

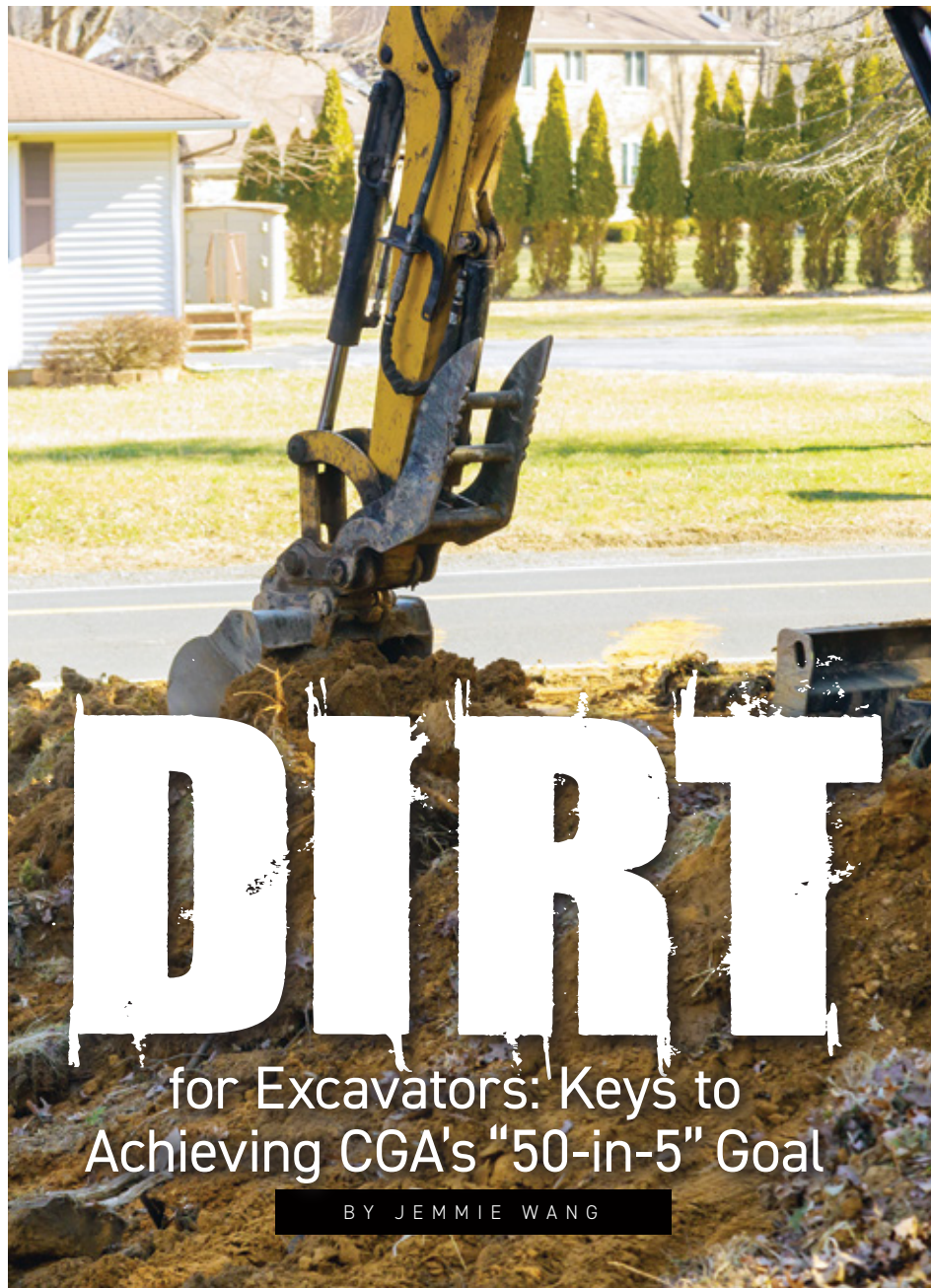
Failure to notify continues to be the most persistent singular root cause of damages year-over-year, with 77% of no-call damages attributed to professional excavators in 2022. Landscaping/fencing, water/sewer and construction are the top types of work performed when professionals cause no-notification damages.

An analysis of data from seven states revealed that as often as 56% of the time, an excavator cannot legally begin work on their planned start date. Telecom and water/sewer operators are the largest contributors to instances in which excavators cannot legally begin work. With an influx of additional excavation forthcoming because of state and federal infrastructure spending, it is imperative that we address the timeliness and accuracy of locating.

How Can We Improve?

Here are a few key takeaways from the CGA report:

1. Focus on behavior change. 811 outreach to excavators should focus on behavior change – particularly consistent and effective use of 811 – and tailor messages to professional vs. private property excavators, focusing on the types of contractors and digging activities driving the majority of non-notification damages.
2. Restore confidence in the 811 system. Consider out-of-the-box ideas for meeting locating demand while reducing unnecessary locate requests; invest in locating process efficiencies and technologies.
3. Prioritize tolerance zone safety. Prioritize tolerance zone safety on the jobsite (pot-hole, maintain marks, use observers to help maintain clearance (see CGA Best Practices 5-17 through 5-20), in trainings, via technology investments (e.g.,



vacuum excavators) and through contract structures.

4. Provide excavators with access to additional information. Provide excavators with access to additional information such as map visualizations of the jobsite through processes like Enhanced Positive Response (see CGA Best Practice 3-31).

Conclusion

Excavators play a critical role in the damage prevention process. By doubling down on safe work practices, proper use of 811, and tolerance zone safety, excavators can help the industry achieve CGA's "50-in-5" goal.

In addition to the above recommendations, excavators can also work closely with other stakeholders, such as facility owners/operators and locators. By communicating effectively and collaborating on best practices, we can all create a safer and more efficient work environment for everyone. **ESG**

Jemmie Wang was former Co-Chair of CGA's Damage Reporting and Evaluation Committee. Mr. Wang is a partner with BizMetrix, LLC and has over 20 years' experience in the damage prevention industry as an executive, consultant, and entrepreneur.

SAFETY

BY KEN HILL, COMMITTEE MEMBER, NATE AND DAN MARKS, COMMITTEE MEMBER, NATE

WHEN TRENCHING-BEFORE YOU DIG!



You've called 811, now what? Just waiting the necessary 3 days (depending on your state law) and then proceeding to excavate or directional drill doesn't mean you will not strike buried utilities. Reading the ticket responses is an important step in following any state 811 laws. Prior to starting the excavation, review the One Call ticket, paying careful attention to the responses provided by the utility owners. The notes may indicate the area is clear, or an on-site meeting is neces-



sary to complete the locates. As part of your notification process you should have white lined your proposed excavation area. This helps ensure the mark out company knows exactly where you plan to excavate.

When you arrive at the work location, examine the area prior to starting your excavation. Walk the area and verify the locate markings have been completed. It is important to review the 811 ticket response and ensure you have all of the facilities marked. Many times there may be multiple telecommunications providers, and they all need to be marked out. If the trenching is outside the Public Right of Way, the facilities may not be marked and it is the excavator's responsibility to have the facilities located. Also, privately owned utilities will not be marked out and it will be up to the excavator and/or property owner to identify those underground facilities. Remember the uniform facility color coding markings.

Next, examine your route, looking for potential conflicts where your route crosses another utilities path, or where your proposed route runs closely parallel. All these are areas where potholing may need to be done to ensure your excavation or drilling operating does not damage the adjacent utilities. During this site walk, also look for clues that there may be an unmarked utility. Look at utility poles to see if there are risers for telephone, fiber optic, CATV or electric that haven't been located. There may be signage on a pole or a field marker to indicate a buried utility. Look for water meter vaults, valve boxes or utility manholes or handholes (all are indicators of buried utilities). As you are conducting your walk around, ensure you are taking video or photos of the route. This helps following a utility strike to prove your path was marked out and you did your due diligence.

When it comes to communications systems, often ILEC's and CLEC's install their systems in a duct bank, but they also routinely install them in a single duct, a pack of inner ducts,

directly buried, and installed in a micro trench. Nearly every building or facility is going to have a communication system of some sort. If you do not see an aerial connection, chances are the communication system is buried. Remember there may be multiple ILEC and CLEC telecommunications cables buried at your worksite.

The depths of communications cables can vary greatly. In a micro trench, the line may only be a few inches deep. In other areas the communication system may be much deeper, even exceeding 6 feet. A common "excuse" heard for a deep utility strike is that they went deep to avoid all the other utilities. Chances are, though, that someone else had the same idea. Many times direct buried telecommunications and electric cables do not run in straight lines and may vary in their path. Trenching parallel to these facilities may require additional potholing to verify their exact location from the tolerance zone.

If you are unsure if the locates are accurate or if you think there may be an unmarked utility on private property, Electromagnetic (EM) locators and Ground Penetrating Radar (GPR) are tools that can help you verify locates. Read that again, EM and GPR are tools that can help you verify locates (it does not replace the 811 mark out).

Once you begin digging, take care while working around utilities. Pothole by using hand dig or soft dig techniques, starting at the outside edge of the tolerance zone and work your way in. Once the utility is exposed, leave it uncovered until you have completed your telecommunication installation. Often times the utility is verified, but then the hole is filled in and the utility is struck. Also, pothole where your pathway will cross the marked utility. The depth of marked utilities may change from where you pothole to where you are actually crossing the utility. If your pothole is in a location other than the crossing point, this could lead to damage.

In the event of a utility strike, alert the proper authorities or utility owners. With regard to telecommunications lines, fiber in particular, handle the system with care to prevent further damage and never look into the ends of a fiber optic cable. The light being transmitted may be beyond what human eyes can see, and that light can damage your eyes.

Underground construction can be done safely. Contractors should understand the situation (811 locates and ticket response), do their own verification (walk the site and document), and utilize proper digging techniques (hand or soft digging and proper potholing). **ESG**

Ken Hill and Dan Marks are both members of NATE: The Communications Infrastructure Contractors Association, with the Safety and Education Committee and Small Cell Committee. Dan Marks has over 20 years of telecom experience and is a Certified Safety Professional (CSP) and Construction Health and Safety Technician (CHST), and OSHA 500 instructor. Ken Hill has over 40 years' experience in the electric, gas, and telecom utility industry and is an OSHA 500 instructor.

The TRUE Cost of Pipeline Damages

The cost of damaged pipes can easily be underestimated when only repair costs are tracked and documented. Improve your understanding of the real costs of a damage with this checklist, based on insight from experienced professionals who have spent years working in the industry.

What percent of hard and soft costs does your company collect? How do damages affect your reputation?

Trackable Costs:

May or May Not Be Collected or Recoverable

- External collection costs/Agency commissions
- Barricades/Traffic Control
- Permits (city/county/state/provincial) to install replacement pipes
- Legal fees and litigation costs
- Exposing the damage for repair
- Materials used in repair
- Restoration of the area
- Actual cost of internal labor, including dispatching crews for gas shut-offs
- Heavy equipment used
- Generator/Power equipment
- Food, lodging, travel expense

Overlooked/Difficult to Track

- Lost customers
- Customer loss of use (refunds/credits)
- Resolution of customer complaints
- Engineering/reengineering due to the cut
- Work load delays
- Damage data capture and submission (software and/or manual)
- Emergency 811 ticket notifications
- Facility owner records updates

Soft Costs

- Negative public feedback
- Difficulty maintaining customer relationships, especially large businesses, with inconsistent services

Societal Costs

- Businesses closing
- Employee down time
- Road closures/traffic delays

Time

- Damage site investigator
- Collection efforts
- Out of service complaints
- Insurance resolution discussions
- Overtime for unexpected increases in workloads
- Employee time/travel for deposition and trial

Emergency Services

- Emergency response dispatching and labor (i.e. fire departments, etc.)
- Emergency mobilization (Contractor/Locator)

Investing in damage prevention improves your bottom-line and keeps your work force continuously focused on proactive work.





DIRECTORICES PARA REACCIONAR EN EMERGENCIAS

Click
Before
You Dig

PÓSTER DE SEGURIDAD PROVEIDO POR PIPELINE ASSOCIATION FOR PUBLIC AWARENESS

CONOZCA LOS PELIGROS

- El gas natural y otros productos de petróleo son inflamables y queman. Si la piel está expuesta, serias irritaciones pueden ocurrir. Los gases escapados pueden desplazar el oxígeno.
- La electricidad hará descargar o cortocircuito a tierra produciendo temperaturas que son cuatro veces más intensas que la temperatura del sol. Como mínimo quemaría la piel y dañaría los órganos internos. Los altos voltajes de electricidad pueden hacer arco a distancias considerables a través del aire. Usted debe estar consiente de cables aéros de alto voltaje y aleje cualquier parte del equipo por lo menos a 10 pies de distancia de los cables aéreos.
- El agua a alta presión pueden causar heridas graves. Las aguas residuales contienen bacterias que puede ser de alto riesgo para la salud. Los gases del alcantarillado son inflamables y queman.

RECONOZCA LAS CONDICIONES PELIGROSAS

- Los charcos de liquido, la tierra soplando, los sonidos siseantes, las nubes de vapor, los olores a gas, las burbujas en agua estancada, la vegetación completamente seca, y la tierra congelada o hielo alrededor de gasoductos/oleoductos son todas señales de escapes de gas natural o petróleo y deben de ser tratadas como una emergencia.
- Trate el contacto con cualquier cable eléctrico como una emergencia sin tener en cuenta si aparece dañado o no o si está cortado. Ésto incluye el contacto con cables aéreos de alto voltaje.
- Con frecuencia los servicios usan zanjas conjuntamente poniéndolo a usted en un mayor riesgo en las zanjas que también tienen electricidad.
- La tierra mojada o descolorida es un indicio de un escape de agua/alcantarillado y debe ser tratada como una condición de emergencia potencial.

EXCAVATION EMERGENCIES



SAFETY POSTERS

**Click
Before
You Dig**

PROVIDED BY PIPELINE ASSOCIATION FOR PUBLIC AWARENESS

KNOW THE HAZARDS

- Natural gas and other petroleum products will ignite and burn. If exposed to the skin, serious irritations may occur. Escaping gases can displace oxygen.
- Electricity will arc or short to ground producing heat that is up to four times greater than the heat of the sun. At a minimum, it will burn skin and damage internal organs. High voltage electricity can arc significant distances through the air. Be aware of all aboveground high voltage lines and keep any part of the equipment at least 10 feet away from overhead lines.
- Water under high pressure can cause serious injury. Wastewater contains bacteria that can be a significant health risk. Sewer gas will ignite and burn.

RECOGNIZE UNSAFE CONDITIONS

- Pools of liquid, blowing dirt, hissing sounds, vapor clouds, gaseous odors, bubbles in standing water, dead vegetation, and frozen soil or ice next to pipelines are all signs of a natural gas or petroleum pipeline leak and should be treated as an emergency.
- Treat contact with any electric line as an emergency regardless of whether it appears undamaged, damaged or severed. This includes contact with aboveground high voltage lines.
- Utilities often jointly use trenches placing you at greater risk in trenches that also have electricity.
- Wet or discolored soil is an indication of a water/sewer leak and should be treated as a potential emergency condition.

EMERGENCY CONDITIONS INVOLVING UNDERGROUND FACILITIES INCLUDE:

Leaks, ruptures, explosions, fires, severe settling or soil movement, weakened or damaged facilities and similar instances where immediate action is necessary to prevent loss of life, injury to persons, or damage to property and the environment. Every situation is different and must be evaluated on the individual circumstances. Below are general emergency response guidelines for various emergency/damage situations involving underground facilities.

RESPOND IMMEDIATELY

NATURAL GAS & PETROLEUM LIQUIDS

1. Turn off equipment, if it can be done safely.
2. Abandon all equipment and get a safe distance away.
3. Avoid open flames or anything that might start a fire. Do not start motor vehicles or electrical equipment. Remove all ignition sources (cigarettes, cell phones, or anything that could create a spark or static electricity).
4. Evacuate the area and keep people out.
5. Do not make contact with escaping liquids.
6. Do not operate any pipeline valves.
7. Call 911 or your local fire, police, or sheriff's office.
8. Do not try to put out a fire. If it's burning, let it burn; ask local firefighters to observe and protect adjacent property.
9. Contact the facility operator immediately to report the condition.

ELECTRICITY

1. Only move equipment in contact with overhead or underground electric lines if you can move it away safely.
2. If excavator equipment remains in contact with electric equipment, it's safest to stay on equipment (unless on fire) until rescue workers arrive; keep others away. If you must abandon equipment, jump clear of it, landing with both feet on the ground at the same time, and then only shuffle or hop away.
3. If a buried electrical line is struck in wet soil/conditions, the ground may become energized for a large area around the strike. *(Hopping or shuffling away will help reduce your risk to step potential.)*

4. Contact the facility operator immediately to report the condition.
5. If appropriate, call 911 for local emergency response.

WATER/SEWER

1. Evacuate the area immediately and keep people out. Leaking water can fill a trench quickly making escape extremely difficult.
2. Do not close valves in order to stop flooding. Closing the wrong valve may affect fire flows and/or possible containment of potable systems.
3. Be careful of damaged high-pressure water lines because even the slightest scratch or vibration can cause pipelines to break.
4. Move carefully around trenches with wet walls. Wet soil can easily cause suffocation.
5. Avoid contact with wastewater. Do not wade in or work around wastewater.
6. Sewer gas is flammable; avoid open flames or anything that might start a fire.
7. Contact the facility operator immediately to report the condition.

FIBER/COMMUNICATION

1. If a fiber optic cable is cut, do not look into the end of it. Serious eye damage may occur.
2. Contact the facility operator and report the condition.

NEVER BURY A DAMAGED FACILITY!

Even a minor scrape, nick, cut, tear, break, or dent should be reported to the facility owner immediately. If not promptly repaired, it could result in a future leak, service outage, explosion, accident, injury, or death.

The above information is intended for educational purposes only. Infrastructure Resources, LLC and Pipeline Association for Public Awareness assume no liability for any individual's use of or reliance upon the above information. While every effort is made to provide accurate and reliable information, Infrastructure Resources, LLC and Pipeline Association for Public Awareness do not guarantee or warrant that the information is complete, accurate or up-to-date.

CONDICIONES DE EMERGENCIA que afectan las instalaciones subterráneas incluyen: escapes, rupturas, explosiones, incendios, hundimiento severo o movimiento de tierra, debilitamiento y daño de gasoductos/oleoductos/acueductos, y casos similares donde es necesaria la acción inmediata para impedir pérdida de vidas, heridas a personas, o daños a propiedad y el medio ambiente. Cada situación es diferente y debe ser evaluada individualmente según las circunstancias. A continuación se dan directrices generales de emergencia para reaccionar ante varias emergencias/situaciones donde hay daños que afectan las instalaciones subterráneas.

REACCIONE INMEDIATAMENTE

GAS NATURAL Y LÍQUIDOS DERIVADOS DEL PETROLEO

1. Apague el equipo, si lo puede hacer con seguridad.
2. Abandone todo el equipo y aléjese a una distancia segura.
3. Evite llamas abiertas o cualquier cosa que pueda prender fuego. No arranque vehículos de motor o equipo eléctrico. Retire todas las fuentes de ignición (cigarillos, teléfonos celulares, o cualquier cosa que pueda crear una chispa o electricidad estática).
4. Evacúe el área y no deje pasar a la gente.
5. No haga contacto con escapes de líquidos.
6. No maneje las válvulas de gasoductos/oleoductos.
7. Llame al número de emergencia 911 o llame a las oficinas locales del cuerpo de bomberos, policía, o sheriff.
8. No trate de apagar el fuego. Si está ardiendo déjelo quemar; pídale a los bomberos que observen y protejan la propiedad adyacente.
9. Inmediatamente póngase en contacto con a la compañía que opera los gasoductos/oleoductos para reportar las condiciones.

ELECTRICIDAD

1. Sólo mueva equipo que esté en contacto con cables eléctricos aéreos o subterráneos si usted lo puede mover con seguridad.
2. Si el equipo excavador continúa en contacto con equipo eléctrico, es más seguro quedararse en el equipo (a no ser que esté en llamas) hasta que lleguen los trabajadores de rescate: no deje que otros se acerquen. Si tiene que abandonar el equipo, salte lejos del equipo, cayendo con ambos pies a la misma vez, y luego sólo aléjese arrastrando los pies o saltando
3. Si hay impacto con un cable enterrado y la tierra está mojada, la tierra en el área alrededor del impacto puede estar energizada. (Reduzca el riesgo de electrocutarse alejándose saltando o arrastrando los pies.)
4. Inmediatamente póngase en contacto con la compañía que opera las instalaciones para reportar la emergencia

5. Si es apropiado llame al número de emergencia 911 para ayuda local.

ACUEDUCTO/ALCANTARILLADO

1. Evacúe el área de inmediato y no deje que la gente se acerque. Un escape de agua puede llenar una zanja rápidamente haciendo su escape sumamente difícil.
2. No cierre las válvulas para impedir inundaciones. Cerrar la válvula equivocada puede impedir que el agua pase por los ductos de agua que usan los bomberos para apagar fuegos y/o posiblemente contaminar el sistema de agua potable.
3. Tenga cuidado con los ductos de agua de alta presión debido a que cualquier leve rasguño o vibración puede causar una ruptura.
4. Muévase con cuidado alrededor de zanjas que tienen las paredes mojadas. Tierra mojada puede derrumbarse fácilmente y causar asfixia.
5. Evite contacto con aguas residuales. No camine o trabaje alrededor de aguas residuales.
6. Los gases del alcantarillado son inflamables: evite llamas abiertas o cualquier cosa que pueda iniciar un incendio.
7. Inmediatamente póngase en contacto con la compañía que opera los acueductos y alcantarillados para reportar la emergencia.

FIBRA ÓPTICA/COMUNICACIÓN

1. Si el cable de fibra óptica está cortado, no mire adentro de la punta del cable. Graves daños a los ojos pueden ocurrir.
2. Inmediatamente póngase en contacto con la compañía que opera la fibra óptica para reportar la situación.

NUNCA ENTIERRE EQUIPO DAÑADO

Nunca entierre equipo dañado como cables eléctricos, gasoductos, oleoductos, o ductos de cualquier tipo. Informe de inmediato a la compañía afectada cualquier leve rasguño, corte, rotura, o abolladura. Si la reparación no es hecha rápidamente en el futuro pueden resultar escapes, interrupción de servicios, explosiones, accidentes, heridas, o muerte.

The above information is intended for educational purposes only. Infrastructure Resources, LLC and Pipeline Association for Public Awareness assume no liability for any individual's use of or reliance upon or above information. While every effort is made to provide accurate and reliable information, Infrastructure Resources, LLC and Pipeline Association for Public Awareness do not guarantee or warrant that the information is complete, accurate or up-to-date.

The Crucial Role of Excess Flow Valves and Curb Valves:



Illustrative credit: Jackson Energy Authority

A Reminder for Excavators

Excavation professionals encounter various challenges, particularly when working near utility lines. Within the realm of underground utilities, the significance of Excess Flow Valves and Curb Valves cannot be overstated in mitigating risks associated with gas service line damage. This article serves as a reminder to excavators, emphasizing the importance of refraining from independent valve operations and highlighting the necessity for collaboration with utility operators and emergency responders in the event of a utility hit.

Excess Flow Valves:

An excess flow valve, or EFV, is a mechanical safety device installed on the underground gas service line between the gas main and gas meter. It is designed to minimize the flow of natural gas in the event of a service line break.

- **Automatic Restriction:** Excess Flow Valves act as fail-safes, promptly limiting the flow of gas when faced with a service line break – comparable to an electric circuit breaker responding to design limits.

- **Bleed-by Safety Awareness:** It is important to note that an EFV's do not shut off the flow of gas completely when they are tripped. A very small, predetermined amount of gas will bleed by per code requirements and by manufacturers specified closure flow rates. The gas may not be escaping under full pressure, but there will typically be enough gas to provide a gas odor, indicating there is a problem. Also, the end user will be alerted as there will be no gas service. Because an EFV restricts the flow of gas, it reduces the potential for explosions, fires, and personal injury. To report a damaged service line, no gas service, or if you smell gas in or outside your home call the utility operator or 911.
- **Curb Valves:** In the domain of larger residential, commercial and industrial users, gas distribution companies where applicable may install Curb Valves in new or replaced service lines, for meter capacities exceeding 1,000 standard cubic feet per hour. These manually operated shutoff valves, situated near the service

main, serve a parallel purpose to Excess Flow Valves in restricting gas flow during emergencies.

- **Manual Operation:** In contrast to Excess Flow Valves, Curb Valves require manual operation. The establishment of clear policies for emergency situations, in coordination with local gas companies, is essential.
- **Collaborative Approach:** Excavators are encouraged to work closely with utility operators and emergency responders in the event of a utility hit. Independent attempts to operate curb valves pose risks and can impede effective response measures.

In conclusion, this reminder underscores the critical role of Excess Flow Valves and Curb Valves in ensuring safety during excavation work. By refraining from independent valve operations, prioritizing collaboration with relevant authorities, and adhering to established safety protocols, excavators can play a critical part in preventing gas-related accidents, safeguarding their fellow professionals and the greater community. **ESG**

MarineSafe811 –



In March 2009, a group of companies met with a mission to identify, trend, and explore common industry issues in preventing coastal and marine pipeline facility damage, releases, and spills. That day, the CAMO (Coastal and Marine Operators) pipeline industry group was born.

In 2023, CAMO included a consortium roughly 35 companies strong and growing. CAMO's current focus among other initiatives is to extend the same "On Land" damage prevention emphases and awareness into coastal and marine areas.

One of CAMO's 2024 initiatives is to rollout the new MarineSafe811 program that will enhance and drive "Goal of Zero Incidents, Near Misses and to Save Lives" through the Safety, Education, Integrity, Protection, and Damage Prevention of underwater infrastructure - resulting in a reduction or elimination of safety and/or environmental related accidents.

Your job may involve decisions that may directly or indirectly impact miles of underwater oil, gas, or chemical pipelines. With inland waterways such as rivers, bays, lakes, coastal areas and offshore areas, pipelines

coexist with vessel and boat activity of all kinds. With more pipelines being installed every day, compounded with increased dredging and marine construction activity in the same waters, the chance of a marine vessel contacting an underwater pipeline continues to grow.

How to Stay Safe Around Pipelines

Making an 811 notification, even in marine areas, is the foundation for the safety of personnel. Additionally, pipelines need to be respected for their potential hazardous impacts to human life and the environment when ruptured. Understanding the roles pipeline and marine construction companies play in safety and damage prevention will help create a successful project. Precautions by all parties need to be understood, agreed upon, and in place before the project begins.

Avoidance procedures should be followed for marine construction projects of all sizes. Pipeline companies and marine construction companies generally have in-house tolerance or "no-go" zones where work may be unsafe or have special conditions. Marine Exclusion Zones, on-land known as Tolerance Zones, are areas near the

pipelines where no activity or work should occur. Before work begins all parties should be in mutual agreement on the Tolerance Zones. Although Exclusion Zones vary among dredging and marine construction companies, 75 feet minimum is generally the no-go working distance.

Obtaining Pipeline Information

Due diligence is necessary when gathering pipeline coordinates, ownership, and contact information. Multiple sources must be checked and inconsistencies may exist across those sources. In many cases, other types of lines may exist in your project area, such as electric, water, fiber optic, phone, and sewer, to which the same general precautions apply. It is beneficial to familiarize yourself with the different pipeline resources available. Each data source has a different layout and provides different information. Question the pipeline companies. It is their responsibility to provide you with the facts. Prior to kicking off a project all parties involved must agree on project plans, crossing agreements, avoidance and safety measures, and work together to stay informed through project duration.

How to Work Safely Near Underwater Pipelines and Utilities

BY ED LANDGRAF, DIRECTOR OF MARINE OPERATIONS AND SAFETY, TEXAS811, AND CHAIRMAN, COASTAL AND MARINE OPERATORS (CAMO)



Once your marine construction project scope is known, outline your total project footprint in your execution plan and voyage plan. Identify all waterways, wetlands, and marine areas that will be traversed by project vessels including dredged material placement areas, heavy equipment transit ways across placement areas, equipment mooring areas, staging areas, off-loading areas, site access areas, anchoring and spud down areas, and any other areas of operational impact.

Safety, Environment, and Emergency Response

Saving lives, protecting the environment, and effectively responding to emergencies are the focus. Always consult with the pipeline company to learn if there are any specific safety, environmental, or emergency concerns and capture them in your safety plan. Cover the plan with all project and vessel personnel. Re-evaluate the plan as new hazards emerge. Include the following recommendations in your plans:

How to Identify a Pipeline Leak

The main signs of a pipeline leak are:

- A continuous bubbling, blowing, or hissing sound from the water

- A rainbow sheen or unusual colored water
- Hydrocarbon smell
Note: Natural gas may be odorless. Always have an active gas detector activated during operations.

Actions After a Pipeline Leak

- Shutdown or minimize the use of all possible ignition sources, motors, lights, etc.
- If possible, drift out of the area before starting a motor or ignition source.
- Evacuate the vessel, if needed.
- Evaluate the situation; record your exact location and time; and move upwind at least ¼ mile or away from the affected area. When safe, call 911.
- Prevent and warn other vessels from entering the area.
- Boom-off or secure the area, if possible.
- If you see a pipeline sign nearby, call the emergency number listed.

Emergency Response and Notification

- Do not extinguish a pipeline fire.
- Immediately contact the pipeline company 24/7 emergency number in your plan to shut down the line and provide any pipeline information and location data. This will help the pipeline company identify the impacted line.

- Wind and water flow direction are helpful.
- Include the location of the nearest boat launch, if known.
- Notify the Coast Guard and the National Response Center (NRC) at (800-424-8802).
- Call 911 to notify the local emergency response agencies.
- Check your state's laws for other entities you must notify when an incident occurs.

Safety and Emergency Plans

All project plans should have the following basic pipeline information stored in multiple readily available locations:

- List of all pipelines in the project scope and the local company contact
- List of the products in each pipeline
 - This will help evaluate the risk and response level in the event of a release.
- Profile of the line X, Y, Z or as close as possible
- 24/7 emergency contact number

If you think a pipeline was struck but no leak occurs, call both the emergency and local contacts. In many states, reporting a strike is required by law. **ESG**

An Open Letter to Horizontal Directional Drillers (HDD)

Dear Operator,

As a former fire officer, I watched recent television coverage of several first responders injured in a western city explosion. I recognized that their quick decisions and heroic actions likely saved many lives. I know you're busy and don't want to hear about firefighters or how they risk their lives, but I must share that I am very worried for their safety. They put themselves in harms way to protect the public, rationalizing the risk by saying, "It's what we do." It's also what the public expects of fire and police in cities and towns all over the United States. Sadly, many incidents that harm people are absolutely avoidable. After many of these explosions, like the one in the Northwest, responders risk their lives while the public is endangered. Many times, these events are preventable.

As a fire service officer and an emergency trainer I have been educating responders in all 50 states on their response to natural gas and pipeline emergencies. Over the last few years I have been following the increased use of a tool you refer to as an HDD (horizontal directional drill). The Fire Service is not generally familiar with the types of construction equipment used by excavators to install underground facilities, such as directional drilling. In fact, responders use words like "small tanks," or a "strange" backhoe to describe the vehicle or operations due to the unrecognizable tracks or excavating nature of the work. Since most of these installations are completed without consequence to underground facilities many responders don't even understand what you do or how it works. In fact, it's not how it works, but what the drill can do when it is not operated safely that truly affects responders. It's not the call to 8-1-1, but it's the subsequent 9-1-1 call after a damage occurs that impacts us.

We are very public-safety oriented when we know the regulations. For example, if you were to block an exit door in a restaurant, chain the exits in a high school gym on game night, or smoke while pumping gas, if there is a conscientious firefighter near you, you'll hear about it! However, responders are not as aware of the safety recommendations of directional drilling. Educating responders about HDD is a great first step towards prevention. I am excited that some proactive states like Missouri, Pennsylvania, and others have been drafting legislation that allows local law enforcement or emergency responders to stop an excavator who is causing or risking a catastrophe.

In natural gas safety programs for emergency responders, I have seen the following problems:

- Responders are not familiar with the need to locate the path of the bore (or that the path has to be marked).
- Responders are not familiar with the observation holes or why they are needed.
- Responders do not know excavators are required to hand dig within the defined tolerance zone when working in proximity to underground utilities such as electric or gas lines.

They are, however, aware of and recognize the correlation between construction jobs using these trenchless technologies and their “runs” (response calls) increasing. They are also becoming uncomfortable with the length of time it sometimes takes the gas company to get there, often because the gas company is already at the site making repairs to similar damages.

It is guaranteed that emergency services will always respond to an “odor of gas,” a “hit gas line,” or any other accident if called. Let me help you understand the responders just a bit better. First, they look at accidents differently than the general public or contractors. Many of you might not know when we respond we focus on three priorities or strategic goals:

- 1. Life Safety (preventing loss of life or injury)**
- 2. Incident Stabilization (trying to keep the problem from spreading)**
- 3. Environmental and/or Property Preservation (protecting property and the environment)**

If you use directional drills while disregarding safe operational procedures then you are jeopardizing the lives of many, including responders. The proliferation of these hits/accidents based on 45 years of emergency response and the increasing number of these emergencies tells me we are headed toward a severe incident of national significance with multiple deaths, injuries, and damage.

In fire service it has often been said, “There is no honor in fighting a fire that could have been prevented.” The industry also has a safety motto, “All accidents are preventable.” In both cases, prevention is the key.

Obviously doing anything more efficient is desirable. Using HDD is certainly faster than using a backhoe or a shovel with less inconvenience to the public, and efficiency is not in direct conflict with safety. Speed leads to unsafe conditions. Even in the Fire Service there are concerns with speed and safety. I learned a cardinal safety practice as a recruit 45 years ago, “There is no running on the fire ground.” Rushing, disregarding procedures, or using a casual approach (“done this a thousand times”) not only puts your personnel in jeopardy, but may place emergency services at the scene with disastrous results.

Directional underground drilling benefits the public, but progress should not be blind to the hazards and potential risks of a hit gas line that could have been avoided by simply taking the time to follow all safety procedures, such as:

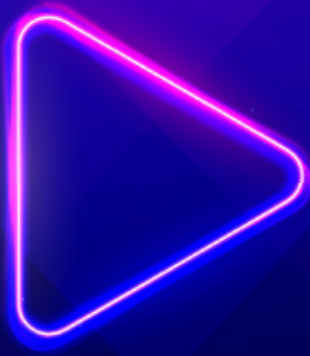
- **Calling 8-1-1 or submitting an online locate ticket before digging**
- **Locating and waiting for services that mark the hazards**
- **Respecting the marks**
- **Digging holes for observation, and more...**

Preventing a tragedy makes your whole operation safer. The moment you think “safety,” it also makes you safer. If not, the entire industry is headed toward an incident of disastrous proportions. My fear is that the emergency services will also be there and suffer injuries. In 45 years of my public safety experience many severe incidents of significance have had wide-ranging impact on an entire industry. Some are easily recognized because they are named after the “city” or the “company” involved.

Every day you have a choice to make - speed versus safety. Sadly, in many cases a clear disregard for safety procedures, whatever the reason, may lead to a tragedy that could have been prevented.

So, think safety – all day – every day!

Sincerely,
Michael Callan
Retired Captain, Wallingford FD
Responding to Utility Emergencies



SAFETY TRAINING VIDEOS

A valuable collection of educational videos for excavators in the underground utility industry, the videos below have been curated from industry stakeholders around the country. Delve into the content contributed by these experts to fortify your knowledge and to further promote a culture of safety in your daily work activities.



#1 – Pipeline Safety for Excavators

- Discover essential information on preventing third-party pipeline damage. Explore the methods employed by operators to locate underground pipelines, guidelines for safe digging near pipelines, recognizing signs of a pipeline leak, and the appropriate response protocols in the event of a pipeline damage.



#3 – Excavations in Construction/Trenching

- Learn how to prevent construction worker fatalities. This video showcases the dangers of trenching and emphasizes OSHA rules such as sloping, shoring, and shielding to ensure worker safety.



#2 – Excavation Emergencies

- Explore the significant topic of excavation emergencies, delving into real-world examples that underscore the importance of actively preventing these critical situations. Gain practical insights on how to address and navigate challenges effectively.



#4 – 5 Steps to Safer Digging Toolbox

- This resource highlights five essential steps for safely excavating around underground utilities, emphasizing pre-marking, contacting 8-1-1, accurate information submission, careful digging within tolerance zones, and prompt reporting of any damage.



KNOW THE HAZARDS

PRODUCTS AND FACILITIES SAFETY INFORMATION FOR PUBLIC OFFICIALS

NATURAL GAS

is a naturally occurring resource formed millions of years ago because of heat and pressure acting on decayed organic material. It is extracted from wells and transported through gathering pipelines to processing facilities. From these facilities, it is transported through transmission pipelines to distribution pipeline systems. The main ingredient in natural gas is methane (approximately 94 percent).

Natural gas is odorless, colorless, tasteless and nontoxic in its natural state. An odorant (called mercaptan) is normally added when it is delivered to a distribution system. At ambient temperatures, natural gas remains lighter than air. However, it can be compressed (CNG) under high pressure to make it convenient for use in other applications or liquefied (LNG) under extremely cold temperatures (-260° F) to facilitate transportation.

PETROLEUM GAS

is a mixture of gaseous hydrocarbons, primarily propane, butane and ethane. These products are commonly used for cooking, heating and other industrial applications. They are easily liquefied under pressure and are often stored and transported in portable containers labeled as Liquefied Petroleum Gas (LPG). When transported in transmission pipelines they may also be identified as Highly Volatile Liquids (HVLs) or Natural Gas Liquids (NGLs). Vaporized LPG may also be found in smaller gas distribution systems. Typically, LPG is a tasteless, colorless and odorless gas. When transported via transmission pipelines

it normally will not have odorant added. Odorant is added when LPG is offloaded to a distribution pipeline system or transport tanks to facilitate leak detection. Ethylene and propylene do have a faint natural odor like petroleum.

PETROLEUM LIQUIDS

is a broad term covering many products, including: crude oil, gasoline, diesel fuel, aviation gasoline, jet fuel, fuel oil, kerosene, naphtha, xylene and other refined products. Crude oil is unrefined petroleum that is extracted from beneath the Earth's surface through wells. As it comes from the well, crude oil contains a mixture of oil, gas, water and other impurities, such as metallic compounds and sulfur. Refinement of crude oil produces petroleum products that we use every day, such as motor oils and gasoline. Crude oil is transported from wells to refineries through gathering or transmission pipelines. Refined petroleum products are transported in transmission pipelines to rail or truck terminals for distribution to consumers. Odorant is not added to these products because they have a natural odor.

ANHYDROUS AMMONIA

is the liquefied form of pure ammonia gas. It is a colorless gas or liquid with an extremely pungent odor. It is normally transported through transmission pipelines and is used primarily as an agricultural fertilizer or industrial refrigerant.

CARBON DIOXIDE

is a heavy gas that is normally transported in transmission pipelines as a compressed

fluid. It is a naturally occurring, colorless, odorless and tasteless gas used in various industries, including meat packaging, produce, petroleum, beverage industries. Under normal conditions, carbon dioxide is stable, inert and nontoxic. However, it acts as asphyxiant when released in large concentrations to the atmosphere.

ETHANOL

(also called ethyl alcohol) is a colorless liquid that is widely used as an additive to automotive gasoline. It may be transported in buried transmission pipelines. Ethanol has a natural odor similar to gasoline and will mix easily with water.

HYDROGEN GAS

is commonly produced from the steam reformation of natural gas. It is frequently used near its production site, with the two main uses being petrochemical processing and ammonia production. Hydrogen is a flammable gas that is colorless, odorless and lighter than air. It is nontoxic, but can act as an asphyxiant.

"SOUR" CRUDE OIL & "SOUR" GAS

refer to products containing high concentrations of sulfur and hydrogen sulfide. Products containing little or no sulfur are often referred to as "sweet." Hydrogen sulfide (H₂S) is a toxic, corrosive contaminant found in natural gas and crude oil. It has an odor like the smell of rotten eggs or a burnt match. Exposure to relatively low levels of hydrogen sulfide (500 ppm) can be fatal.

Looking for guidance on when to shelter-in-place or evacuate? Scan here for a technical guide.



LEAK, HAZARD & EMERGENCY RESPONSE INFORMATION

INDICATIONS OF A LEAK

	NATURAL GAS	PETROLEUM GAS	PETROLEUM LIQUIDS	ANHYDROUS AMMONIA	CARBON DIOXIDE	ETHANOL	HYDROGEN GAS	SOUR CRUDE OIL (H ₂ S)	SOUR GAS (H ₂ S)
SEE – liquid pooling on the ground			●		●		●		
SEE – a white vapor cloud that may look like smoke		●		●					
SEE – fire coming out of or on top of the ground	●	●				●		●	
SEE – dirt blowing from a hole in the ground	●	●		●	●	●		●	
SEE – a sheen on the surface of water		●	●				●		
SEE – an area of frozen ground in the summer	●	●		●		●		●	
SEE – an unusual area of melted snow in the winter	●	●		●		●		●	
SEE – an area of dead vegetation	●	●	●		●	●	●	●	
SEE – bubbling in pools of water	●	●		●		●		●	
HEAR – a loud roaring sound like a jet engine	●	●						●	
HEAR – a hissing or whistling noise	●	●		●	●	●		●	
SMELL – an odor like rotten eggs or a burnt match	1	1					●	●	
SMELL – an odor like petroleum liquids or gasoline		●	●		●		●		
SMELL – an irritating and pungent odor				●			●	●	

HAZARDS OF A RELEASE

Highly flammable and easily ignited by heat or sparks	●	●	●			●	●	●	●
Will displace oxygen and can cause asphyxiation	●	●		●	●		●	●	
Vapors are heavier than air and will collect in low areas		●	●	●	●	●	●	●	
Contact with skin may cause burns, injury or frostbite		●	●	●	●	●		●	
Initial odor may be irritating and deaden the sense of smell							●	●	
Toxic and may be fatal if inhaled or absorbed through skin				●			●	●	
Vapors are extremely irritating and corrosive				●			●	●	
Fire may produce irritating and/or toxic gases	●	●	●	●		●	●	●	
Runoff may cause pollution			●	●		●	●		
Vapors may form an explosive mixture with air	●	●	●			●	●	●	
Vapors may cause dizziness or asphyxiation without warning	1	1			●		●		
Is lighter than air and can migrate into enclosed spaces	●						●		

EMERGENCY RESPONSE

Avoid any action that may create a spark	●	●	●			●	●	●	●
Do NOT start vehicles, switch lights or hang up phones	●	●	●			●	●	●	●
Evacuate the area on foot in an upwind and/or uphill direction	●	●	●	2	2	●	●	2	2
Alert others to evacuate the area and keep people away	●	●	●	2	2	●	●	2	2
From a safe location, call 911 to report the emergency	●	●	●	●	●	●	●	●	●
Call the pipeline operator and report the event	●	●	●	●	●	●	●	●	●
Wait for emergency responders to arrive	●	●	●	●	●	●	●	●	●
Do NOT attempt to close any pipeline valves	●	●	●	●	●	●	●	●	●
Take shelter inside a building and close all windows				2	2			2	2

1 The majority of these products are naturally odorless and only certain pipeline systems may be odorized. Odorant can also fade or be scrubbed out when leaking products migrate through soil.

2 Sheltering in place is an alternative to evacuation when the products are toxic or the risk of fire is very low. Refer to "Shelter-In-Place or Evacuate Guidance Document" provided online at: qrco.de/Evacuation

CHANGES TO THE LAWS IN YOUR STATE

SUMMARY OF DAMAGE PREVENTION LAWS

JENNIFER REAMS, UNDERGROUND TECHNICAL ADVISOR
INFRASTRUCTURE COMPLIANCE CONCEPTS | JREAMS.ICC@GMAIL.COM

As states start to form various types of enforcement for their damage prevention laws, recognizing changes to these laws are becoming a little more complicated. Due to this, it is recommended that you stay involved with your state one call, review state codes, administrative codes, enforcement authority rule making decisions, state resolutions, and (of course) “Changes to the Laws in Your State” article that is produced yearly.

ARKANSAS

SB297 Passed 03/24/2023: Arkansas made substantial changes to their damage prevention law. First, the bill added/modified definitions for: (a) Contract locator, (b) Excavator, (c) Extraordinary circumstances; (which means floods, snow, ice storms, tornadoes, earthquakes, or other natural disasters and/or cybersecurity events involving the one call center’s system or the operator’s system.), (d) Infrastructure project, (e) Modified definition for mechanized equipment to exclude hydro vacuum systems, (f) Modified the definition of excavation by adding dredging to the list of activities considered excavation.

Second, the bill made significant changes to notification and response requirements as follows: (a) Added provision clarifying that each excavator must make the notification for their own excavation, (b) The notification obligation may not be delegated to a person who is not performing the excavation, (c) If multiple entities are carrying out excavation or demolition; then each entity is responsible for providing notice, (d) The two working day wait period is modified to not include day the notification was made, (e) Mandatory white lining, (f) Mandatory positive response, (g) Prior to beginning excavation, the excavator shall confirm through the one call center’s electronic positive response system that all operators have responded and that all facilities that may be affected by the proposed excavation have been marked, (h) The excavator may begin excavation before the specified waiting period only if the excavator has confirmed that all operators have responded with an appropriate electronic positive response, (i) If the operator declares extraordinary circumstances; the operator shall notify the excavator directly or through positive response the time and date that the excavation site will be marked, (j) Excavations utilizes only hydro-vacuum are exempt from notification requirements.

Finally, this bill introduces a new penalty structure as follows: (a) A training program for underground facilities damage prevention will be developed and administered by the one call center, (b) The Attorney General shall produce a quarterly report that shall include the number of complaints submitted, the number of the submitted complaints that were settled/prosecuted; and the amount of fines collected, (c) Penalties for violations involving an interstate/intrastate natural gas pipeline facility or an interstate/intrastate hazardous liquid pipeline facility are increased to a maximum civil penalty of two hundred fifty-seven thousand six hundred sixty-four dollars for each day the violation persists to a maximum of two million two hundred fifty-seven thousand six hundred sixty-four dollars. (d) Any person who damages an underground facility and violates any provisions of this chapter shall be subject to:

- For a first violation in a twelve-month period, the person shall be ordered to undergo training.
- For a second violation in a twelve-month period, the person shall be ordered to pay a civil penalty in an amount up to five thousand dollars for each violation.
- For three or more violations in a twelve-month period, the person shall be ordered to pay a civil penalty in an amount up to ten thousand dollars for each violation.
- For subsequent violations in a twelve-month period, the maximum penalty amount shall not exceed fifty thousand dollars.

- If mandatory training has been ordered and not completed within one hundred and twenty days, a monetary penalty up to two thousand five hundred dollars for each violation shall be assigned.

<https://arkansas811.com/>

CALIFORNIA

Important implementation dates to remember from previous legislation:

On or after 01/01/2023 - All new subsurface installations shall be mapped using a geographic information system and maintained as permanent records of the operator. The exceptions for this obligation are “oil and gas flowlines 3 inches or less in diameter that are located within the administrative boundaries of an oil field.”

Updated enforcement website: energysafety.ca.gov

www.digalert.org www.usanorth811.org
<https://energysafety.ca.gov/who-we-are/underground-safety-board/>

COLORADO

Best Practice- Large/Complex Projects Approved 11/09/2023: The Underground Damage Prevention Safety Commission has approved best practices for large/complex projects including but not limited to: Determine when to use this best practice, how to use this best practice and stakeholder impact of this best practice.

<http://colorado811.org/>
<https://ops.colorado.gov/udp-safety-commission/best-practices-standards>

GEORGIA

PSC Rule 515-9-4-.14 entitled Georgia Underground Marking Standards; Amended 12/22/2023 Effective 01/11/2024: Updates to this rule include the following: (a) Clarification for the term “No conflict” when responding to a locate request. This should only be communicated by facility owners through positive response. Also, paint or stakes should be left at the proposed excavation if there is no conflict., (b) Adds the requirement for both paint and flags in particular environmental conditions, (c) Allows for the use of flags and stakes in addition to the use of paint for underground utility markings, (d) Clarifies marking standards for facilities that are bundled within a trench or that do not have enough separation for separate tones, (e) Updated standards for marking ducts, (f) Clarification of utility markings for traffic control and traffic management systems.

<https://www.georgia811.com/>

CHANGES TO THE LAWS IN YOUR STATE!

IDAHO

HB235 Passed 03/31/2023 Effective 07/01/2023: This bill extends the life of a notification ticket from three weeks to four weeks. Other notable inclusions are: (a) New definition of emergency excavation that includes an excavator requirement to notify the one call two hours prior to excavation in most cases, (b) Provides guidance, with exceptions, to underground facility owners for responding to emergency excavation notices. (Underground facility owner will contact excavator within one hour and arrive at site of the emergency excavation to provide marks within two hours), (c) Underground facility owners are required to provide updated representative contact information on an annual basis, (d) In regards to underground facilities' ability to receive compensation for short notice tickets, exemptions are added for emergency excavations and unidentified facilities on excavation site.

<https://www.digline.com/>

ILLINOIS

SB1438 Passed 07/28/2023 Effective 01/01/2024: This bill created the Illinois Dig Once Act. The purpose of this act is to minimize traffic interruptions, to enhance efficiency and coordination between the state, units of government, and utilities. The Department of Transportation, the Illinois State Toll Highway Authority, and the Department of Commerce and Economic Opportunity shall consult with the state one call center to jointly develop a policy and rules to reduce the scale and number of repeated excavations related to roads, highways, tollways, and expressways for the installation and maintenance of broadband infrastructure and public utilities in rights of way.

<https://www.illinois1call.com/>

INDIANA

IURC RM #22-03 Approved 07/26/2023 Effective 01/25/2024: Notable changes/additions from this new rule are as follows: (a) Clarification of marking requirements for underground utilities. (Underground facility operators shall mark their facilities not later than 7:00 a.m. at the prevailing time observed in Indianapolis, Indiana, on the working day after the elapse of two full working day periods from 7:00 a.m. to 6:00 p.m.), (b) The Commission, the pipeline safety division or a person approved by the commission can conduct education that is deemed "training.", (c) Requires a gas underground utility to indicate if the facility is a service line and must provide size and type of pipeline if greater than 2" in diameter, (d) Life of a notification tickets expires at 11:59 p.m. on the twentieth day from the notification ticket request, (e) Underground gas utilities must notify the IURC of damage to their facilities within 30 days, (f) If a gas facility must reschedule a facility locate, it must now reschedule within the two full working days, log the time, date, and the person responsible for notification, and give the new date when the facilities will be located, (g) Clarification of the tolerance zone to indicate 24" on all sides (including each side, top, and bottom) of the facility, (h) Gas operators must provide positive response to the one call center.

<https://indiana811.org/>

KANSAS

HB2226 Passed 04/24/2023 Effective 01/01/2024: This bill increases the life of a notification ticket to twenty calendar days. Other notable inclusions are: (a) The allowance of virtual white lining for excavation sites, (b) Grants the state corporation commission the ability to adjust the extent of time the notice of intent to excavate is valid, (c) Grants the state

corporation commission the ability to adjust the maximum number of days allowed to an operator for providing the location of the tolerance zone, (d) All utility damage must be reporter to operator and Kansas 811.

<https://kansas811.com/>

LOUISIANA

HB292 Passed 06/12/2023 Effective 08/01/2023: This bill requires that excavation activities shall commence not more than one hundred twenty hours past the mark-by-time. Other key points to this new law are: (a) If excavator makes excavation notification via telephonic notice; the excavator shall physically mark the proposed excavation using white paint, flags or stakes, (b) To clarify that the marking of the operator's facility shall be provided for excavation/demolition purposes only, (c) Requires potholing to determine the actual location of underground facilities in order to avoid damage, (d) A forestry excavator and the operator are to work together to determine the actual location of facilities during forestry excavation operations.

<https://www.louisiana811.com/>

MAINE

SB1479 Passed 06/12/2023: This bill directs the Public Utilities Commission to convene a stakeholder group to discuss liquefied propane gas systems and the Dig Safe law. The Commission shall submit a report summarizing the groups discussion and any recommended legislation.

<https://www.digsafe.com/>

MISSISSIPPI

SB2102 Passed 03/21/2023: Mississippi made substantial changes to the damage prevention law with the passing of this bill as follows: (a) Extend the pre-excavation notification period to three working days, (b) Adds definition for Impending Emergency (circumstances potentially dangerous to life, health, property, or loss of customer services, which would likely develop into an emergency if excavation is not initiated sooner than the normal notification requirements allow), (c) Includes advanced notification and locating requirements for excavations that fit the definition of impending emergency, (d) Increases the excavation renew notification to at least three days and not more than four days prior to the notification expiration date, (e) Extend underground facility locating and reporting requirement to three working days, (f) Adds that misrepresentation of emergency or impending emergency is a violation, (g) Underground facilities operators shall respond within two hours when notified of unmarked/unknown facilities at the site of excavation, (h) If an operator brings a lawsuit to enforce provisions; the prevailing party shall be awards legal costs, expenses and fees.

<https://www.ms811.org/>

NEBRASKA

LB 683 Passed 05/26/2023; Effective 09/01/2024: Nebraska has made several significant changes to their underground damage prevention law as follows: (a) It shall be a violation for an excavator to provide notice of excavation for an area that cannot be reasonably started within seventeen calendar days, (b) It shall be a violation to request remarking that cannot be started or continued within fourteen calendar days of remarking notification, (c) If the excavator receives notice of an alleged violation, excavator shall describe why the alleged violation occurred, (d) The Underground

CHANGES TO THE LAWS IN YOUR STATE!

Excavation Safety Committee is created and representatives shall be appointed by the Governor. The Committee representatives are:

- The State Fire Marshal/designee
- Three operator representatives
- One operator alternate (in case operator representative is unavailable)
- Three excavator representatives
- One excavator alternate (in case excavator representative is unavailable)

(e) The Committee shall govern in accordance with rules and regulations promulgated/adopted by the State Fire Marshal and shall not meet less than monthly, (f) The Committee shall review investigations, determine if violation has occurred, and determine appropriate penalties, (g) Training may be assessed in lieu of or in addition to civil monetary penalties, (h) Violator is responsible of repayment of costs associated with violation investigations, (i) Civil penalties in excess of ten thousand dollars shall be referred to Attorney General/prosecuting attorney for action of behalf of the state.

<https://www.ne1call.com/>

NEVADA

SB27 Passes 05/25/2023; Effective 07/01/2023: Key points of this new approved legislation are: (a) New definition for non-mechanical equipment which means “equipment operated solely by human power, including, without limitation, a hammer or other device used to drive stakes or rods into the ground, mattock, pickaxe, shovel or spade.”, (b) Clarifies and redefines the term “immediate actions” in that an immediate action includes, without limitation:

- The use of non-mechanical equipment and methods that are standard in the industry to determine the severity or spread of an underground leak.
- The locating of a subsurface installation by the operator using non-mechanical equipment within the area of a proposed excavation under certain circumstances.

(c) Enhances the definition of excavation to include use of non-mechanical equipment by:

- “A contractor”
- “Any person, other than a contractor, if at any point the movement or removal of such material occurs more than twelve inches below the surface of the original groundline.”

(d) Replaces the term “hand-tool” with the new definition of non-mechanized equipment.

SB 397 Passed 05/31/2023; Effective 07/01/2023: This bill modifies the definition of operator to exclude interstate railroad companies that operate more than 1,000 miles of track in Nevada from the duties imposed on operators of subsurface installation if: (1) the subsurface installations owned, operated, or maintained by the company are located within the right-of-way of the company; (2) Are not subject to certain federal regulations governing pipeline safety. **This modification eliminates the requirement to join an association in order to receive notices regarding excavations or demolitions near operator owned facilities and the requirement to assist in locating and identifying subsurface installations of the operator that are affected by a proposed excavation or demolition.**

<https://www.usanorth811.org/>

NORTH DAKOTA

HB 1064 Passed 03/23/2023: This bill modified the definition of excavation to include “dredging”.

<https://www.ndonecall.com/>

OKLAHOMA

SB 497 Passed 05/05/2023; Effective date 11/01/2023: This bill modified the following: (a) Added an exemption to the definition of excavation to include “the moving of earth by tools manipulated only by human power for burying communication lines of a communications provider in a private or public easement or right-of-way when depth is not greater than twelve inches and within twelve inches of a communications provider terminal, (b) Adds a definition for “Design” or “survey” to mean the “notice to facility operators to provide underground facility information during the design or engineering phase of a project to mitigate potential impact to existing underground facilities”, (c) When a design/survey notice is received the operator/designee has fourteen days from time of the request to provide the relative utility information. Special note: excavation may not take place with a design/survey notification.

<https://okie811.org/>

SOUTH DAKOTA

HB1184 Passed 03/02/2023: This bill eliminates reference to the Public Utilities Commission and makes the deposit of monetary penalties into the one call fund mandatory.

<https://www.sdonecall.com/>

TENNESSEE

SB0952/HB0802 Effective 04/28/2023: Modifications as follows: (a) Added a definition of electronic white lining, (b) Added new subdivision for hand dig/hand digging to mean “any movement, placement, or removal of earth, rock, or other materials in or on the ground by use of non-mechanized tools or equipment, including, but not limited to, shovels, picks, post hole diggers, vacuum excavation, or soft digging, (c) Amended previous definition of excavation to mean “an operation for the purpose of the movement, placement, or removal of earth, rock, or other materials in or on the ground by use of mechanized equipment, discharge of explosives, or by hand digging, and includes auguring, backfilling, blasting, boring, digging, ditching, drilling, grading, pile-driving, plowing-in, pulling-in, ripping, scraping, sub-soiling, trenching, or tunneling;”, (d) Allowance for “electronic white lining” when designating the location of a proposed excavation, (e) Exemptions of notification requirements for: (1) A property owner utilizing non-mechanized tools or equipment on their own property; or (2) The use of non-mechanized tools or equipment by or on behalf of a member operator to a depth not greater than twelve inches for locating, repairing, connecting, protecting, or routine maintenance of the member operator’s underground facilities, (f) Authorizes the one call service to collect data on notification for excavations under certain circumstances.

HB798/SB782 Effective 04/25/2023: Increases the membership of the executive committee for the underground utility damage enforcement board from three to five members.

HB0233/SB0067 Effective 03/23/2023: Extends the underground utility damage enforcement board until 06/30/2028

<https://www.tenn811.com/>

CHANGES TO THE LAWS IN YOUR STATE!

VIRGINIA

HB 2132/SB1145 Passed 03/23/2023: This bill made significant modifications to the Virginia one call law as follows: (a) New definition for “exigent circumstances” (Which means circumstances outside of an operator’s or contract locator’s control that prevent an operator or locator from completing the marking task. This includes a wrong address provided with the locate request, failure to provide a reasonably specific location of proposed excavation, inaccessibility of the excavation site due to physical barrier or risk of serious bodily injury, a locate request that cannot be carried out by a traditional locating method requiring assistance from the operator, catastrophic technological failure outside of the locator’s, operator’s, or notification center’s control, or the area of excavation does not conform with the defined limits of a locate request.), (b) Inclusion of definitions for “positive response” and “positive response systems”, (c) Eliminates definition and provisions for “Special Project Notice”, (d) Change of terminology throughout the Underground utility Damage Prevention Act from “Notification to the Notification Center” to “Locate Request”, (e) Defined limits of a locate requested are reduced to 1/3 of a mile per locate request, (f) Inserts compliance requirements related to positive response, (g) Eliminates the requirement for operators to provide field locates at the request of the designer, (h) Added a provision that no excavator shall begin any excavation before reviewing the positive response status, (i) Modifies and adds requirements when clear evidence of unmarked facilities are found on the excavation site, (j)

Increased penalties to not exceed ten thousand dollars per violation of the excavator notification requirement and added penalties not to exceed five thousand dollars for all other violations.

Special note: New section that states “Any person who knowingly and intentionally excavates after being notified by the Commission to cease excavation operations because the excavation constitutes an immediate threat to safety or property **is guilty of a Class 6 felony.**”

<https://va811.com/>

BILLS INTRODUCED

Indiana HB1122 Introduced 01/25/2024

Nebraska LB 1186 Introduced 1/12/2024

Oklahoma SB 1744 Introduced 02/05/2024

Oregon proposed dig rule changes for 2024. More information found at follows: <https://digsafelyoregon.com/2023/12/07/2024-changes-to-oregon-dig-rules-proposed/>

Washington HB 2409 Introduced 01/17/2024

Missouri HB 2329 01/09/2024

Missouri SB 1315 01/10/2024

ENFORCEMENT AGENCIES

Enforcement of the damage prevention laws in your state can be a bit confusing to navigate. Questions such as: who is enforced, who enforces it, and what is enforceable are frequent throughout the US. To help you with your navigation below we have categorized states in accordance with enforcement venues. Please note some states have more than one avenue of enforcement and may appear more than once in the list below. The Pipeline Hazardous Materials Safety Administration also has compiled extensive documentation for each state, which can be found at the following link:

<https://primis.phmsa.dot.gov/comm/DamagePreventionSummary.htm?nocache=6529>

- **Public Utilities Commission:** Alaska, Arizona, California, Connecticut, Delaware, Georgia, Hawaii, Illinois- Illinois Commerce Commission, Indiana- Indiana Utility Regulatory Commission, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Utah, Vermont, Virginia, West Virginia, Wisconsin
- **Attorney General:** Arkansas, District of Columbia, Iowa, Nevada, South Carolina, Texas, Utah, Nebraska, Wyoming
- **Relevant County Court:** Alabama, Alaska, Arkansas, New Mexico,
- **Division of Safety:** Washington
- **Division of Occupational and Professional Licenses:** Idaho
- **Standalone Damage Prevention Boards/ Committees/Authorities:** Alabama, Colorado (Under the Department of Labor and Employment), Maryland, Mississippi, Puerto Rico, North Carolina, Idaho
- **Office of Energy Infrastructure Safety:** California
- **Railroad Commission:** Texas
- **Department of Energy:** New Hampshire
- **Department of Labor:** Montana
- **Department of Natural Resources:** Louisiana; California
- **State One Call:** North Dakota, South Dakota, Wyoming
- **Law Enforcement:** Florida
- **Federal Office of Pipeline Safety:** Maine (may defer), Alaska
- **Department of Consumer and Regulatory Affairs:** District of Columbia



Notification Center and State Law Directory

Informational purposes only. Information and laws are subject to change. Consult your local Notification Center website for updated information. Excavation Safety Alliance, LLC attempted to verify all information as of publication date, and accepts no responsibility for missing or incorrect information.



You can reach your local Notification Center in the U.S. by dialing 811. Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)			
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design		Emergency	Overhead	Large Projects
ALABAMA / Alabama 811 / 800-292-8525																							
Website: al811.com	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	12"	Y	Y	Y	N	N	18"
Hours: 24 hours, 7 days																	*						
Advance Notice: 2 full working days (not including day of notification)	*Agricultural purposes only																						
Marks Valid: 20 working days																							
Law Link: al811.com/law																							
ALASKA / Alaska Dig Line, Inc. / 800-478-3121 or 907-278-3121																							
Website: 811ak.com	N	Y	Y	Y	Y	Y	N	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	N	Y	24"	
Hours: 8:00 AM - 5:00 PM, M-F/Emergency 24/7																							*
Advance Notice: 2-10 business days based on location	*24-30" based on proposed depth of dig																						
Marks Valid: 15-20 business days based on location																							
Law Link: 811ak.com/faq																							
ARIZONA / Arizona 811 / 800-782-5348																							
Website: arizona811.com	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	Y	N	N	Y	Y	N	N	24"
Hours: 6:00 AM - 5:00 PM, M-F																							
Advance Notice: 2 full working days(excludes weekends and holidays)																							
Marks Valid: 15 working days																							
Law Link: arizona811.com/resources/																							
ARKANSAS / Arkansas 811 / 800-482-8998																							
Website: arkansas811.com	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	N	N	Y	Y	N	Y	18"	
Hours: 24 hours, 7 days																							
Advance Notice: 2 to 10 working days																							
Marks Valid: 20 working days																							
Law Link: arkonecall.com/statelaw/statelaw.aspx																							
CALIFORNIA																							
Underground Service Alert of Northern CA & NV USA North 811 / 800-642-2444																							
Website: usanorth811.org	N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	Y	24"
Hours: 24 x 7																							
Advance Notice: 2 working days, not including the day of notification																							
Marks Valid: 28 days																							
Law Link: usanorth811.org (Quick Links / Law & Excavation Manual)																							
Underground Service Alert of Southern California / 800-422-4133																							
Website: digalert.org	N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	Y	24"
Hours: 6:00 AM - 7:00 PM, M-F																							
Advance Notice: 2 working days to 14 calendar days not including date of notice	*DOT and non-pressurized sewer lines, storm drains and drain lines exempt																						
Marks Valid: 28 days																							
Law Link: https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=5.&title=1.&part=&chapter=3.1.&article=2																							
COLORADO / Colorado 811 / 800-922-1987																							
Website: co811.org • Hours: 24 hours	N	Y	Y	Y	Y	Y	Y*	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	N	Y	18"	
Advance Notice: 2 days, not to include the day of notice																							
Marks Valid: 30 days																							
Law Link: colorado811.org/one-call-legislation/																							
CONNECTICUT / Call Before You Dig / 800-922-4455																							
Website: www.cbyd.com	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	18"
Hours: 7:00 AM - 5:00 PM, M-F; Emergencies 24 Hours																							
Advance Notice: 2 full working days up to 30 calendar days (excludes weekends, holidays and the day of notification)																							
Marks Valid: 30 days																							
Law Link: www.cbyd.com/resources/ct-cbyd-state-law-regulations#																							
DELAWARE / Miss Utility of Delmarva / 800-282-8555																							
Website: missutility.net/delaware	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	N	N	N	Y	Y	N	N	24"
Hours: 24 hours, 7 days																							
Advance Notice: 2 full business days																							
Marks Valid: must start within 10 calendar days, no expiration as long as marks still visible and scope does not change.																							
Law Link: delcode.delaware.gov/title26/c008/index.shtml																							
FLORIDA / Sunshine 811 / 800-432-4770																							
Website: sunshine811.com	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	24"	
Hours: 7:00 AM - 6:00 PM																							
Advance Notice: 2 full business days (10 if dig site is underwater)																							
Marks Valid: 30 days																							
Law Link: sunshine811.com/law																							

Notification Center and State Law Directory HELP US STAY UP TO DATE. Directory information is also available online at ExcavationSafetyGuide.com . Report any updates to this directory by calling 866-279-7755. You can reach your local Notification Center in the U.S. by dialing 811. Click Before YouDig.com	TICKETS			STATE LAWS & PROVISIONS							NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)				
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage		Design	Emergency	Overhead	Large Projects
GEORGIA / Georgia 811 / 800-282-7411																							
Website: Georgia811.com Hours: 7:00 AM - 6:00 PM, M-F • (24/7 emergency) Advance Notice: 2 business days (excluding day of call) Marks Valid: 30 calendar days Law Link: georgia811.com/index.php/laws-policies/	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N*	N	N	N**	N	Y	Y	Y	Y	Y	18"
* Routine road maintenance ** Farming activities																							
HAWAII / Hawaii One Call Center / 866-423-7287 / Tickets Fax: 877-695-2466																							
Website: callbeforeyoudig.org Hours: 24 hours, 7 days Advance Notice: 5 working days, not to exceed 28 calendar days Marks Valid: 28 calendar days Law Link: callbeforeyoudig.org/law.htm	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	N	Y	N	N	N	Y	Y	Y	N	N	30"	
IDAHO																							
DIG LINE / 800-342-1585 Website: digline.com Hours: 24 hours Advance Notice: 2 business days Marks Valid: 28 Days Law Link: https://legislature.idaho.gov/statutesrules/idstat/title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	Y	24"
BONNER/BOUNDARY One Call / 800-626-4950 Website: passwordinc.com Hours: 24 hours, 7 days Advance Notice: 2 business days Marks Valid: 28 days Law Link: legislature.idaho.gov/statutesrules/idstat/Title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	N	24"
SHOSHONE/BENEWAH One Call / 800-398-3285 Website: passwordinc.com Hours: 24 hours, 7 days Advance Notice: 2 business days Marks Valid: 28 days Law Link: legislature.idaho.gov/statutesrules/idstat/Title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	N	24"
KOOTENAI COUNTY One Call / 800-428-4950 Website: kootenaicounty811.com Hours: 24 hours, 7 days Advance Notice: 2 business days Marks Valid: 28 days Law Link: legislature.idaho.gov/statutesrules/idstat/Title55/T55CH22/	N	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	N	Y	24"
ILLINOIS																							
JULIE, INC. / 800-892-0123 Website: illinois1call.com • Hours: 24 hours, 7 days Advance Notice: 48 hours notice (two business days), but no more than a 14 calendar day advance notice prior to the start of excavation. Marks Valid: 28 calendar days Law Link: illinois1call.com/lawandenforcement/	N	Y	N	N	Y	Y	Y	N	Y*	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	N	18"
811 CHICAGO / 312-744-7000 Website: ipi.cityofchicago.org/Digger Hours: 24 hours a day, 7 days a week Advance Notice: 48 hours • Marks Valid: 28 days Law Link: https://codelibrary.amlegal.com/codes/chicago/latest/chicago_il/0-0-0-2651040	N	Y	N	N	Y	Y	Y	Y	Y*	Y	Y	Y	N	N	Y	Y	N	Y	N	Y	N	N	18"
*When possible																							
INDIANA / Indiana 811 / 800-382-5544																							
Website: indiana811.org • Hours: 24 hours, 365 days Advance Notice: 48 hours notice (two working days), but no more than a 20-calendar day advance notice prior to the start of excavation. Marks Valid: 20 calendar days Law Link: indiana811.org/wp-content/uploads/2019/06/IC-8-1-26-1.pdf	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	N	24"
IOWA / Iowa One Call / 800-292-8989																							
Website: iowaonecall.com • Hours: 24 hours, 7 days Advance Notice: 48 hours, excluding Saturdays, Sundays, and legal holidays Marks Valid: 20 calendar days Law Link: iowaonecall.com/Default.aspx?tabid=404#iowa	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y*	N	Y	Y	Y	N	Y	18"
* Normal farm operations less than fifteen inches																							

Know what's below. Call before you dig.

Expand public awareness by visiting call811.com. You will find a variety of downloadable elements available for use free in your company/organization's existing campaigns.



	TICKETS			STATE LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)			
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Remarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design		Emergency	Overhead	Large Projects
KANSAS / Kansas 811 / 800-344-7233																							
Website: kansas811.com Hours: 24 hours, 7 days Advance Notice: 2 full working days(not including day of notice) Marks Valid: 15 calendar days Law Link: kansasonecall.com/static/pdf/KUUDPA_04.03.2010.pdf	N	Y	Y	Y	Y	Y	Y	N	N	Y	N	N	N	Y*	Y	Y	N	N	Y	Y	N	N	24"
*Homeowner retains responsibility for any damages due to digging																							
KENTUCKY / Kentucky 811 / 800-752-6007																							
Website: kentucky811.org Hours: 24 hours/7 days Advance Notice: 2 working days Marks Valid: 21 calendar days Law Link: kentucky811.org/the-dig-law	N	Y	N	Y	Y	Y	N	N	N	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	Y	24"
LOUISIANA / Louisiana 811 / 800-272-3020																							
Website: louisiana811.com Hours: 7:00 AM - 6:00 PM, Emergency Locates 24/7 Advance Notice: 2 Business Days Marks Valid: 20 Days/30 Days for Forestry Law Link: louisiana811.com/index.php/dig-law	N	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	N	Y	N	Y	N	Y	Y	Y	N	N	18"
MAINE / Dig Safe System, Inc. / 888-344-7233																							
Website: digsafe.com Hours: 24 hours, 7 days Advance Notice: 72 hours(excluding weekends and holidays) Marks Valid: 60 days; must start within 30 days Law Link: http://www.digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
MARYLAND / Miss Utility (Western Shore) / 800-257-7777																							
Website: www.missutility.net Hours: 24 hours, 7 days Advance Notice: 2 full business days Marks Valid: 12 business days Law Link: www.missutility.net/maryland/	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	Y*	N	N	N	N	Y	Y	N	N	18"
*Hand dig only up to a depth of 6". Mechanized equipment must call.																							
Miss Utility of Delmarva (Eastern Shore) / 800-441-8355 Website: missutilitydelmarva.com Hours: 24 hours, 7 days Advance Notice: 2 full business days Marks Valid: 12 business days Law Link: www.missutility.net/maryland/	N	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	N	Y	N	N	N	N	Y	Y	N	N	18"
MASSACHUSETTS / Dig Safe System, Inc. / 888-344-7233																							
Website: digsafe.com Hours: 24 hours, 7 days Advance Notice: 72 hours(excluding weekends and holidays) Marks Valid: 30 days Law Link: digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
MICHIGAN / Miss Dig System, Inc. / 800-482-7171																							
Website: missdig811.org Hours: 24 hours Advance Notice: 3 business days(excluding weekends and holidays) Marks Valid: 3 weeks to 6 months Law Link: missdig811.org/education/public-act-174.html	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	Y	Y	N	Y	18"
MINNESOTA / Gopher State One Call / 800-252-1166 or 651-454-0002																							
Website: gopherstateonecall.org Hours: 24 hours Advance Notice: 48 hours(excluding weekends and holidays) Marks Valid: 14 days Law Link: revisor.leg.state.mn.us/statutes/?id=216D	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	Y	N	N	Y	Y	N	Y	24"	
MISSISSIPPI / Mississippi 811, Inc. / 800-227-6477 / Tickets Fax: 601-362-7533																							
Website: ms811.org Hours: 24 hours, 7 days Advance Notice: 3 working days Marks Valid: 14 working days Law Link: ms1call.org/One Call-law	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	24"	12"	Y	Y	Y	N	Y	18"
*Less than 16"																							
MISSOURI / Missouri One Call System / 800-344-7483 / Tickets Fax: 573-635-8402																							
Website: mo1call.com Hours: 24 hours, 7 days Advance Notice: 2 working days, not counting day of request Marks Valid: As long as visible Law Link: mo1call.com/manual_law.php	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	Y*	N	Y	Y	Y	N	N	24"


Notification Center and State Law Directory Informational purposes only. Information and laws are subject to change. Contact your local Notification Center website for updated information. Excavation Safety Alliance, LLC attempted to verify all information as of publication date, and accepts no responsibility for missing or incorrect information. You can reach your local Notification Center in the U.S. by dialing 811. Click Before You Dig.com	TICKETS			STATE LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)			
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory P remarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design		Emergency	Overhead	Large Projects
MONTANA																							
MONTANA 811 / 800-424-5555 Website: montana811.org Hours: 24 hours, 365 days Advance Notice: 2 business days Marks Valid: 30 days Law Link: montana811.org/montana-dig-law.html	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y*	N	Y	Y	Y	Y	Y	N	N	18"
*Only under certain circumstances																							
NEBRASKA / Nebraska811 / 800-331-5666																							
Website: ne1call.com Hours: 24 hours, 365 days Advance Notice: 2 to 10 business days excluding holidays and weekends Marks Valid: 17 Days Law Link: ne1call.com/ne-law-enforcement/nebraska-statutes/	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	N	18"
NEVADA / USA North 811 / 800-642-2444																							
Underground Service Alert of Northern CA & NV Website: usanorth811.org Hours: 24/7 Advance Notice: 2 working days, not including the date of notification Marks Valid: 28 days Law Link: usanorth811.org (Quick Links/Law & Excavation Manual)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	Y	N	Y	N	N	24"
NEW HAMPSHIRE / Dig Safe System, Inc. / 888-344-7233																							
Website: digsafe.com Hours: 24 hours, 7 days Advance Notice: 72 hours(excluding weekends and holidays) Marks Valid: 30 days Law Link: digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
NEW JERSEY / New Jersey One Call / 800-272-1000 / Tickets Fax: 800-705-4559																							
Website: nj1-call.org Hours: 24 hours Advance Notice: 3 full business days Marks Valid: 45 business days Law Link: nj1-call.org/nj-law/	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	Y	N	Y	N	N	24"
NEW MEXICO / New Mexico One Call, Inc. dba NM811 / 800-321-2537 / Tickets Fax: 800-727-8809																							
Website: nm811.org Hours: 7:00 AM - 5:00 PM, M-F / Emergencies & Damages: 24 hours Advance Notice: 2 working days, not including the day of the notification Marks Valid: 15 Days Law Link: nm811.org/new-mexico-811-law/	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	Y	18"
NEW YORK																							
DIG SAFELY NEW YORK / 800-962-7962 Website: digsafelynewyork.com Hours: 24 hours, 365 days Advance Notice: 2 to 10 working days(Excluding day of call) Marks Valid: 10 working days Law Link: digsafelynewyork.com/resources/nys-code-rule-753	N	Y	N	N	Y	Y	Y	N	N	Y	Y	N	N	N	N	N	N	Y	Y	Y	N	N	24"
NEW YORK 811 / 800-272-4480 Website: newyork-811.com Hours: 24 hours, 7 days Advance Notice: 2 to 10 business days Marks Valid: 10 working days Law Link: newyork-811.com/excavators/code-753-at-a-glance	N	Y	Y	N	Y	Y	Y	N	N	Y	Y	N	N	N	N	N	N	Y	Y	Y	N	N	24"
NORTH CAROLINA / North Carolina One Call Center, Inc. / 800-632-4949																							
Website: nc811.org Hours: 24 hours, 365 days Advance Notice: 3 full working days Marks Valid: 15 working days Law Link: nc811.org/north-carolina-law.html	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	N	24"


Know what's below. Call before you dig.


You can also reach your local Notification Center by dialing 811 anywhere in the United States. This is a FREE call and a FREE service.



	TICKETS			STATE LAWS & PROVISIONS										NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)		
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory P remarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead		Large Projects	
NORTH DAKOTA / North Dakota One Call / 800-795-0555																								
Website: ndonecall.com Hours: 24 hours Advance Notice: 2 Full Business Days Marks Valid: 21 calendar days Law Link: legis.nd.gov/cencode/t49c23.pdf?20130530105605	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	N	Y	Y	N	N	24"	
OHIO																								
OHIO811 / 800-362-2764 Website: OHIO811.org Hours: 24 hours, 7 days Advance Notice: 48 hours but not more than 10 working days Marks Valid: As long as visible and work begins within 10 days of original ticket Law Link: oups.org/law	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	18"	
OKLAHOMA / Okie811 / 800-522-6543																								
Website: okie811.org Hours: 24 hours, 7 days Advance Notice: 48 hours excluding date of notification, week-ends and legal holidays Marks Valid: 14 calendar days Law Link: okie811.org/thelaw	N	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	N	Y	24"	
OREGON / Oregon Utility Notification Center / 800-332-2344 / Tickets Fax: 503-293-0826																								
Website: digsafelyoregon.com Hours: 24 hours, 7 days Advance Notice: 2 Full Business Days Marks Valid: 45 days Law Link: digsafelyoregon.com/faqs/ounc_ors_oar.htm	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	12"	N	Y	N	N	Y	Y	N	N	24"	
PENNSYLVANIA / Pennsylvania One Call System, Inc. / 800-242-1776																								
Website: pa1call.org Hours: 24 hours, 7 days Advance Notice: 3 to 10 business days (construction), 10-90 days (design), at least 10 days (large projects) Marks Valid: as long as equipment is on site Law Link: pa1call.org/palaw	N	Y	Y	Y	Y	Y	Y**	N	Y	Y	Y	Y	N*	N	N	Y	N	Y	Y	Y	N	Y***	18"	
<p>* PennDot minor routine maintenance exempt if without 24" depth from highest spot in ROW ** Municipal Roads - minor routine maintenance if within 18" depth from highest point in ROW *** Exemptions include PennDOT within state road DOT, Stripper Well Lines in Class 1 areas **** Large projects accepted online only</p>																								
RHODE ISLAND / Dig Safe System, Inc. / 888-344-7233																								
Website: digsafe.com Hours: 24 hours, 7 days Advance Notice: 72 hours(excluding weekends and holidays) Marks Valid: Must start within 30 days, as long as marks maintained Law Link: digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"	
SOUTH CAROLINA / South Carolina 811 / 888-721-7877																								
Website: sc811.com Hours: 7:30 AM - 5:30 PM, M-F Advance Notice: 3 to 12 full working days notice(10-20 full working days notice subaqueous) Marks Valid: 15 working days Law Link: sc811.com/state-law/	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	N	N	24"	
SOUTH DAKOTA / South Dakota 811 Center / 800-781-7474																								
Website: sc811.com/state-law/ Hours: 24 hours Advance Notice: 48 hours(excluding weekends and holidays) Marks Valid: 21 working days from start date and time on ticket Law Link: sdonecall.com/law.asp	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y*	N	N	N	N	N**	Y	Y	Y	N	Y	18"	
<p>* Damage reporting required. All damage must be reported to the facility operator, or if the operator is unknown, to South Dakota 811 Center. ** For agricultural tilling and road and ditch maintenance to a depth of 18" only; homeowners have a 12" depth exception for tilling of soil and gardening</p>																								
TENNESSEE / Tennessee 811 / 800-351-1111																								
Website: tn811.com • Hours: 24 hours Advance Notice: Not less than 3 working days, not more than 10 working days Marks Valid: 15 calendar days Law Link: https://www.tn.gov/content/dam/tn/publicutility/documents/uudeb/65-31-101etseq.pdf	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	N	N	Y	Y	Y	N	N	24"	

Notification Center and State Law Directory HELP US STAY UP TO DATE. Directory information is also available online at ExcavationSafetyGuide.com . Report any updates to this directory by calling 866-279-7755.  You can reach your local Notification Center in the U.S. by dialing 811.	TICKETS			STATE LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility, plus the width of the utility)			
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Remarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design		Emergency	Overhead	Large Projects
TEXAS / Texas811 / 800-344-8377																							
Website: texas811.org Hours: 24 hours Advance Notice: 48 hours (excluding weekends and holidays) Marks Valid: 14 working days Law Links: statutes.capitol.texas.gov/Docs/UT/htm/UT.251.htm	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y	16"	Y	Y	Y	N	N	18"
UTAH / Blue Stakes of Utah 811 / 800-662-4111																							
Website: bluestakes.org Hours: 8:00 AM - 4:00 PM, M-F Advance Notice: 2 business days, 48 hours notice Marks Valid: 14 calendar day Law Link: le.utah.gov/xcode/Title54/Chapter8A/54-8a.html	N	Y	Y	Y	Y	N	Y	N	N	Y	Y	N	N	N	N	N	N	N	Y	N	N	N	24"
VERMONT / Dig Safe System, Inc. / 888-344-7233																							
Website: digsafe.com Hours: 24 hours, 7 days Advance Notice: 48 hours(excluding weekends and holidays) Marks Valid: 30 days Law Link: digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
VIRGINIA / Virginia 811 / 800-552-7001																							
Website: va811.com Hours: 24 hours, 7 days Advance Notice: 2 working days(excluding day of call) Marks Valid: 15 working days Law Link: va811.com/laws-and-regulation	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	N	Y	24"
WASHINGTON / Washington 811 / 811 / 800-424-5500																							
Washington 811 Website: digsafewa.com Northwest Utility Notification Center (NUNC) Website: digsafewa.com Inland Empire Utility Coordinating Council (IEUCC) Website: digsafewa.com Hours: 24 hours, 7 days Advance Notice: 2 business days Marks Valid: 45 days Law Link: washington811.com/wa-dig-law-rcw-19-122/	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	Y	24"
WASHINGTON D.C. / District One Call / 800-257-7777																							
Website: missutility.net Hours: 24 hours, 7 days Advance Notice: 96-business hours Marks Valid: 15 business days Law Link: https://code.dccouncil.gov/us/dc/council/code/titles/34/chapters/27/	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	N	N	N	N	N	N	Y	N	N	18"
WEST VIRGINIA / West Virginia 811 / 800-245-4848																							
Website: wv811.com Hours: 24 hours Advance Notice: 2 days but not more than 10 Marks Valid: 10 days Law Link: wv811.com/one-call-law	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	N	24"
WISCONSIN / Diggers Hotline / 800-242-8511																							
Website: diggershotline.com Hours: 24 hours, 7 days Advance Notice: 3 working days Marks Valid: For duration of work if marks remain visible and work is continuous Law Link: docs.legis.wisconsin.gov/statutes/statutes/182/0175	N	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	N	N	N	N	Y	Y	Y	Y	Y	Y	18"

Know what's below. Call before you dig. Expand public awareness by visiting call811.com. You will find a variety of downloadable elements available for use free in your company/organization's existing campaigns. 	TICKETS			STATE LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)			
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design		Emergency	Overhead	Large Projects
WYOMING / One-Call of Wyoming, Inc. / 811 or 1-800-849-2476 (if out of state) Website: onecallofwyoming.com Hours: 24 hours Advance Notice: 2 full business days Marks Valid: 14 business days Law Link: https://www.onecallofwyoming.com/wp-content/uploads/2022/10/WY-State-Statute.pdf	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	N	24"

Canadian One Call and Provincial Law Directory  Canadian One Call Centres Committee	TICKETS			PROVINCIAL LAWS & PROVISIONS								NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED				Tolerance Zone (either side of the utility plus the width of the utility)			
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design		Emergency	Overhead	Large Projects
ALBERTA / Utility Safety Partners / 800-242-3447 Website: utilitiesafety.ca Hours: 8:00 AM - 4:30 PM, M-F (Emergency or Online: 24/7) Advance Notice: 3 full working days Marks Valid: up to 30 days, determined by member	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	N	N	N	*	Y	Y	Y	Y	Y	1m (39")
BRITISH COLUMBIA / BC 1 Call / 800-474-6886 Website: bc1c.ca Hours: 24 hours / 7 days Advance Notice: Regular & Project - 3 working days excluding weekends and holidays Large Project - 5 working days excluding weekends and holidays Planning & Design - 10 working days excluding weekends and holidays Marks Valid: 60 calendar days	N	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	N	N	N	Y	Y	Y	N	Y	VARIES
MANITOBA / Click Before You Dig Manitoba / 800-940-3447 Website: ClickBeforeYouDigMB.com Hours: 8:00 AM - 5:00 PM Advance Notice: 3 full working days excluding weekends and holidays Marks Valid: Determined by member	N	Y	Y	Y	N	N	N	N	N	Y	Y	N	N	N	N	N	N	Y	N	Y	N	Y	VARIES
ONTARIO / Ontario One Call / 800-400-2255 Website: OntarioOneCall.ca Hours: 24 hours, 365 days Advance Notice: 5 working days Marks Valid: Minimum 60 days Law Link: www.ontario.ca/laws/statute/12o04	N	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	Y	VARIES
QUEBEC AND ATLANTIC PROVINCES / Info-Excavation / 800-663-9228 Website: info-ex.com Hours: 24 hours/7 days Advance Notice: 72 hours (3 working days) Marks Valid: Maximum 180 days	N	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	N	N	N	Y	Y	Y	Y	Y	1m (39")
SASKATCHEWAN / Sask 1st Call / 866-828-4888 Website: sask1stcall.com Hours: 8:00 AM - 4:30 PM, M-F (Emergency 24/7) Advance Notice: 3 full working days Marks Valid: 30 days	N	Y	Y	Y	N	N	N	N	N	Y	N	N	N	N	N	N	N	Y	Y	Y	N	Y	VARIES

PIPELINE OPERATOR CONTACT DIRECTORY

Company	EMERGENCY	NON-EMERGENCY	WEB ADDRESS
Aera Energy, LLC	(800) 247-5977	(661) 858-8752	www.aeraenergy.com
Alliance Pipeline L.P.	(800) 884-8811	(713) 627-5986	www.alliancepipeline.com
Amplify Energy Corp.	(307) 328-2348	(307) 392-2363	www.amplifyenergy.com/
Arrow Pipeline, LLC	(866) 234-7473	(713) 380-3283	www.crestwoodlp.com
Atmos Energy Corporation	(866) 322-8667	(888) 286-6700	www.atmosenergy.com
Aux Sable Midstream	(701) 628-9380	(701) 628-9393	www.auxsable.com
Avista Utilities	(800) 227-9187	(800) 227-9187	www.myavista.com
Basin Electric Power Cooperative	(800) 339-5616	(701) 557-5895	www.basinelectric.com
Bayou Midstream	(888) 489-2747	(346) 249-3200	www.bayoumidstream.com
Belle Fourche Pipeline Co	(866) 305-3741	(701) 575-2205	www.truecos.com
Black Hills Colorado IPP, LLC	(719) 696-3220	(719) 696-3209	www.blackhillsenergy.com
Black Hills Energy	(800) 694-8989	(303) 566-3509	www.blackhillsenergy.com
Black Hills Energy - IA Gas	(800) 694-8989	(888) 890-5554	www.blackhillsenergy.com
Black Hills Power dba Black Hills Energy	(307) 757-3010	(307) 757-3010	www.blackhillspower.com
Bridger Pipeline LLC	(866) 305-3741	(701) 575-2205	www.truecos.com
Bridger Swan Ranch, LLC	(307) 634-5305	(307) 634-5305	www.granitepeakindustries.com
Butte Pipe Line Company	(866) 305-3741	(701) 575-2205	www.truecos.com
Caliber Midstream Partners, LP	(866) 535-2522	(303) 628-1410	www.calibermidstream.com
California Natural Resources Group	(888) 664-4435	(805) 477-9805	www.calnrg.com
California Resources Central Valley	(661) 763-6911	(661) 763-6363	www.crc.com
California Resources Elk Hills, LLC	(661) 763-6911	(661) 763-6363	www.crc.com
Calumet Montana Refining, LLC	(406) 761-4100	(406) 454-9887	www.montanarefining.com
Carbon California	(805) 531-3712	(805) 794-8593	www.carbonenergycorp.com
Cascade Natural Gas	(888) 522-1130	(888) 522-1130	www.cngc.com
Cedar Falls Utilities	(319) 268-6999	(319) 268-5280	www.cfu.net
Genex Pipeline, LLC	(800) 421-4122	(406) 628-5443	www.chspipelines.com
Central Iowa Power Cooperative	(641) 782-5518	(641) 782-2158	www.cipco.net
Central Valley Gas Storage	(855) 303-2847	(530) 439-2607	www.cvgasstorage.com
Chevron Midstream Services, LLC	(800) 762-3404	(801) 698-9434	www.chevron.com
Chevron Pipe Line Company	(800) 762-3404	(801) 975-2324	www.chevron.com
Cheyenne Rail Hub, LLC	(307) 634-5305	(307) 634-5305	www.granitepeakindustries.com
CHS Inc. Terminals	(800) 421-4122	(855) 424-7747	www.chspipelines.com
CHS MRI Pipelines	(844) 721-6611	(855) 424-7747	www.chspipelines.com
CHS MRI Terminal	(844) 721-6611	(855) 424-7747	www.chspipelines.com
City of Blanding	(435) 678-2916	(435) 678-2791	www.blanding-ut.gov
City of Ellensburg	(509) 925-8534	(509) 962-7124	www.ci.ellensburg.wa.us
City of Fort Morgan	(970) 867-4350	(970) 542-3910	www.cityoffortmorgan.com
City of Lake City, Natural Gas Dept.	(386) 758-5405	(386) 758-5405	www.lcfla.com
City of Sioux Falls	(605) 367-8162	(605) 367-8162	www.siouxfalls.org
City of Walsenburg	(719) 738-1044	(719) 890-0049	www.cityofwalsenburg.com
Cobra Oil & Gas Corporation	(517) 563-8381	(989) 345-7903	www.cobraogc.com
Colorado Interstate Gas - MT, UT and Western WY	(877) 712-2288	(800) 276-9927	www.kindermorgan.com
Colorado Interstate Gas - Western CO	(877) 712-2288	(800) 276-9927	www.kindermorgan.com
Colorado Natural Gas	(800) 883-3181	(800) 720-8193	www.coloradonaturalgas.com
Colorado Springs Utilities	(719) 448-4800	(719) 448-4800	www.csu.org
Contango Resources - Midwest	(307) 437-9500	(307) 437-9500	www.contango.com
Contango Resources - Monell	(307) 437-9500	(307) 437-9500	www.contango.com
Continuum Midstream, LLC	(877) 587-0026	(806) 278-8266	
Cowboy Midstream LLC	(307) 337-1412	(307) 337-1412	www.cowboymidstreamllc.com
CPN Pipeline Company	(877) 432-5555	(707) 374-1505	www.calpine.com
Crestwood Dakota Pipeline, LLC	(866) 234-7473	(701) 859-5001	www.crestwoodlp.com
Crooks Municipal Utilities	(605) 359-2371	(605) 543-5238	www.cityofcrooks.net
Dakota Access, LLC - ND	(800) 753-5531	(701) 495-6639	www.energytransfer.com
Dakota Access, LLC - SD	(800) 753-5531	(713) 375-1652	www.energytransfer.com
Dakota Gasification Company	(866) 747-3546	(701) 880-1129	www.dakotagas.com
Dakota Natural Gas LLC	(888) 933-9743	(507) 209-2100	www.dakotaturalgas.com
Denbury Onshore, LLC	(888) 651-7647	(972) 673-2000	www.denbury.com
Divide Creek Gathering LLC	(844) 663-0191	(281) 664-6839	www.sginterests.com
Dominion Energy Idaho	(800) 767-1689	(801) 324-5000	www.dominionenergy.com
Dominion Energy Utah	(800) 767-1689	(801) 324-5000	www.dominionenergy.com
Dominion Energy Wyoming	(800) 767-1689	(801) 324-5000	www.dominionenergy.com

• If you would like any additional information from a pipeline member, call or visit the links above.

COMPañÍA	EMERGENCIA	NO EMERGENCIA	DIRECCIÓN DE INTERNET
E&B Natural Resources - Kern	(661) 392-7575	(661) 387-8500	www.ebresources.com
E&B Natural Resources - LA - HBOC	(310) 286-9114	(661) 387-8500	www.ebresources.com
E&B Natural Resources - LA - Murphy	(800) 926-6370	(661) 387-8500	www.ebresources.com
E&B Natural Resources - LA - Packard	(424) 702-1017	(661) 387-8500	www.ebresources.com
E&B Natural Resources - LA - San Vicente	(424) 702-1018	(661) 387-8500	www.ebresources.com
El Paso Natural Gas - CO and NM	(800) 334-8047	(713) 420-5433	www.kindermorgan.com
Elk Hills Power, LLC	(661) 763-6911	(661) 763-6363	www.crc.com
Enable Bakken Crude Services	(701) 842-6916	(800) 829-9922	www.enablemidstream.com
Enbridge - Express Pipeline	(800) 794-3827	(800) 700-8666	www.enbridge.com
Enbridge Energy	(800) 858-5253	(715) 394-1451	www.enbridgeus.com
Enbridge Pipelines (North Dakota) LLC	(800) 858-5253	(701) 857-0800	www.enbridge.com
Energy Operations Management Inc	(877) 723-3344	(916) 859-4700	
Energy Operations Management Nevada LLC	(877) 723-3344	(916) 859-4700	
Energy West Montana	(800) 570-5688	(406) 791-7500	www.egas.net
Enterprise - Jonah Gas Gathering	(800) 203-1347	(307) 537-4721	www.enterpriseproducts.com
Enterprise - Mid America Pipeline - CO, UT, WY	(888) 883-6308	(970) 263-3015	www.enterpriseproducts.com
Enterprise Products - CO	(800) 546-3482	(713) 381-2802	www.enterpriseproducts.com
Enterprise Products - Piceance Gas Gathering	(888) 883-6308	(888) 806-8152	www.enterpriseproducts.com
EOG Resources - CO and WY	(307) 266-7406	(970) 895-2247	www.eogresources.com
EOG Resources - OK	(800) 225-8314	(405) 246-3100	www.eogresources.com
ExxonMobil Production	(307) 276-6000	(307) 276-6238	www.exxonmobil.com
Fountain Valley Power LLC	(303) 594-2655	(303) 922-0630	www.onwardenergy.com
Freeport-McMoRan Oil & Gas	(805) 739-9111	(805) 934-8288	www.fcx.com
Front Range Pipeline, LLC	(800) 421-4122	(406) 628-5443	www.chspipelines.com
Frontier Field Services	(800) 503-5545	(575) 676-3528	www.durangomidstream.com
Garretson Natural Gas	(605) 594-6723	(605) 594-6723	www.garretsonsd.com
Genesis Alkali LLC	(307) 875-8150	(307) 872-2131	www.alkali.tronox.com
Georgia-Pacific - Camas Paper	(360) 834-8414	(360) 834-3021	www.gp.com
Glacial Lakes Energy Aberdeen LLC	(800) 367-6964	(507) 524-4103	http://www.glaciallakesenergy.com/
GMBU	(435) 823-4114	(972) 277-1397	http://scoutep.com
Granite Creek Energy	(307) 527-2873		www.granitecreekenergy.com
Grayson Mill Energy LLC	(833) 463-6749	(832) 271-8050	www.graysonmillenergy.com
Great Plains Natural Gas Company	(877) 267-4764	(701) 222-7655	www.gpng.com
Grove Municipal Service Authority	(918) 801-5404	(918) 786-6107	www.cityofgrove.com
Harlan Municipal Utilities	(712) 755-5182	(712) 733-0026	www.harlannet.com
Havre Pipeline Company LLC	(406) 357-2233	(406) 357-3643	
Hawaii Electric Light Co.	(808) 969-0413	(808) 969-6999	www.hawaiielectriclight.com
Hawaii Gas	(808) 526-0066	(808) 535-5933	www.hawaiigas.com
Hawaiian Electric Company, Inc	(808) 543-7685	(808) 548-7311	www.hawaiianelectric.com
Hess Corporation	(800) 406-1697	(701) 664-6200	www.hess.com
Hildale - Colorado City Gas Department	(435) 467-1160	(435) 874-1160	
Holly Energy Partners	(877) 748-4464	(214) 954-3998	www.hollyenergy.com
Humboldt Municipal Gas Utility	(888) 320-1490	(605) 661-5268	www.humboldtsd.com
Intermountain Gas Company	(877) 777-7442	(877) 777-7442	www.intgas.com
Island Energy Services	(808) 682-4711	(808) 682-2227	www.islandenergyservices.com
Jackalope Gas Gathering Services, LLC	(866) 234-7473	(817) 339-5570	www.crestwoodlp.com
Jayhawk Pipeline	(888) 542-9575	(855) 424-7747	www.chspipelines.com
KB Pipeline	(800) 433-0252	(800) 433-0252	www.portlandgeneral.com
Kern River Gas Transmission Company	(800) 272-4817	(800) 420-7500	www.kernrivergas.com
Kinder Morgan Altamont	(435) 454-3927	(800) 276-9927	www.kindermorgan.com
Kinder Morgan CO2 Company, LP	(877) 390-8640	(325) 573-3105	www.kindermorgan.com
Kinder Morgan Double H Pipeline	(877) 977-2078	(307) 686-8288	www.kindermorgan.com
Liberty Utilities	(855) 344-8134	(855) 872-3242	https://libertyutilities.com/
Linde Inc	(800) 926-9620	(801) 359-8629	www.linde.com
Lost Creek Gathering Company	(877) 534-4117	(307) 328-2833	
Lumen Midstream Partners - KS	(316) 542-0395	(316) 542-0395	www.durangomidstream.com
Macpherson Oil Company	(661) 448-5200	(661) 448-5200	www.macphersonenergy.com
Magellan Midstream Partners LP - ND	(800) 720-2417	(701) 282-7134	www.magellanlp.com
Magellan Midstream Partners LP - WY and SD	(800) 720-2417	(918) 574-7000	www.magellanlp.com
Matrix Oil Corporation	(805) 586-0674	(805) 798-3592	www.matrixoil.com
Mid American Energy Company	(800) 595-5325	(888) 427-5632	www.midamericanenergy.com

• Si quisiera más información sobre un miembro de tubería, llame o visite los enlaces arriba.

PIPELINE OPERATOR CONTACT DIRECTORY

Company	EMERGENCY	NON-EMERGENCY	WEB ADDRESS
Midstream Energy Partners	(866) 295-2176	(661) 765-4087	
Midwest Energy Inc.	(800) 222-3121	(800) 222-3121	www.mwenergy.com
MIGC	(307) 682-9710	(970) 515-1901	www.migc.com
Montana Dakota Utilities Company	(800) 638-3278	(701) 222-7655	www.montana-dakota.com
Mountain Gas Resources, Inc.	(307) 870-2859	(307) 212-3461	www.westernmidstream.com
MountainWest Pipeline	(800) 300-2025	(801) 647-1971	www.mwpipe.com/
MPLX - CO and UT	(800) 840-3482	(800) 840-3482	www.marathonpetroleum.com
MPLX - ND and MT	(866) 283-7676	(800) 840-3482	www.marathonpetroleum.com
MPLX - WY	(800) 840-3482	(800) 840-3482	www.marathonpetroleum.com
MPLX - WY NGL	(800) 725-1514	(800) 840-3482	www.marathonpetroleum.com
NEOKC Pipeline, LLC	(405) 239-6001	(405) 239-6001	
Nephi City Gas	(435) 623-0822	(435) 623-0822	www.nephi.utah.gov
Nesson Gathering System LLC	(701) 664-3139	(701) 664-3139	www.xtoenergy.com
Nevada Gold Mines	(775) 778-4802	(775) 748-1824	https://www.barrick.com/English/operations/nev
Northern Natural Gas - IA	(888) 367-6671	(888) 689-5175	www.northernnaturalgas.com
Northern Natural Gas - SD	(888) 367-6671	(888) 689-5175	www.northernnaturalgas.com
NorthWestern Energy - MT	(888) 467-2669	(406) 497-2446	www.northwesternenergy.com
NorthWestern Energy - NE and SD	(800) 245-6977	(406) 497-2446	www.northwesternenergy.com
NuStar Logistics, L.P	(800) 481-0038	(361) 290-0604	www.nustarenergy.com
NuStar Pipeline Operating Partnership L.P.	(800) 759-0033	(316) 721-7068	www.nustarenergy.com
NW Natural	(800) 882-3377	(503) 610-7639	www.nwnatural.com
ONEOK Fort Union Gas Gathering	(866) 575-6465	(307) 687-3103	www.oneok.com
ONEOK NGL Pipeline, L.L.C.	(855) 348-7258	(855) 689-1298	www.oneok.com
ONEOK Rockies Midstream	(800) 778-7834	(406) 433-3664	www.oneok.com
ONEOK Rockies Midstream - Wyoming	(866) 575-6465	(307) 687-3103	www.oneok.com
ONEOK Viking Gas Transmission	(888) 417-6275	(218) 745-5082	www.vgt.nborder.com
Overland Pass Pipeline Company	(800) 635-7400	(307) 872-2833	www.williams.com/overlandpass/
Pacific Gas and Electric Company	(800) 743-5000	(800) 743-5000	www.pge.com/pipelinesafety
Par Rocky Mountain Midstream LLC	(888) 550-7766	(406) 439-0805	www.parpacific.com
Paradigm Midstream	(800) 514-3624	(214) 389-8168	www.paradigmstream.com
Paradox Midstream	(435) 587-2237	(970) 529-3419	www.paradoxresources.com
Paradox Resources	(866) 774-8385	(435) 686-7600	www.paradoxresources.com
Pecan Pipeline (Wyoming), LLC	(866) 899-2626	(866) 994-4775	www.pecanpipeline.com
Pecan Pipeline Company - ND	(866) 899-2626	(701) 628-1635	www.pecanpipeline.com
Pembina Cochin Pipeline - ND	(800) 360-4706	(701) 252-9013	www.pembina.com
Petro - Hunt, LLC	(701) 863-6500	(701) 863-6500	www.petrohunt.com
Phillips 66 Pipe Line Company	(877) 267-2290	(406) 441-4749	www.phillips66.com
Pinedale Natural Gas, Inc.	(307) 367-4427	(970) 928-9208	www.pinedalegas.com
Pioneer Pipeline / Phillips 66	(877) 267-2290	(406) 441-4749	www.phillips66.com
Plains Pipeline, L.P.	(800) 708-5071	(713) 993-5098	www.plainsallamerican.com
Platte River Power Authority	(970) 229-1733	(970) 226-4000	www.prpa.org
Prospector Pipeline Company	(877) 723-3344	(916) 859-4700	
Puget Sound Energy	(888) 225-5773	(888) 225-5773	www.pse.com
Red Cedar Gathering Company	(970) 382-0828	(970) 764-6900	www.redcedargathering.com
Ringwood Gathering Company	(800) 967-8493	(580) 438-2345	www.ringwoodgathering.com
Roaring Fork Midstream, LLC	(877) 375-0488	(720) 923-5593	www.roaringforkmidstream.com
Running Horse Pipeline, LLC	(800) 889-7437	(928) 871-4880	www.nnogc.com
San Diego Gas & Electric	(888) 611-7343	(800) 411-7343	www.sdge.com
Savage	(701) 774-9316	(701) 774-9312	www.savageservices.com
Scout Energy - MT	(701) 774-5731	(406) 654-1341	https://scoutep.com/
Scout Raven Ridge Pipeline	(888) 839-1960	(972) 277-1397	http://scoutep.com
Sentinel Peak Resources	(661) 324-6571	(661) 809-9451	www.sentinelpeakresources.com
Signature Flight Support	(808) 836-1830	(808) 226-3981	www.signatureflight.com
Silver Creek Midstream Holdings	(866) 628-1693	(469) 614-2257	www.scmidstream.com
SIMCOE LLC	(970) 247-6925	(970) 247-6925	https://simcoe-energy.com/
Sinclair Pipeline Company	(800) 321-3994	(307) 328-3553	www.sinclairoil.com/pipelines.html
SoCal Holdings, LLC / LA Basin	(562) 624-3452	(562) 624-3400	www.crc.com
South Dakota Intrastate Pipeline Co.	(800) 852-0949	(605) 224-0949	www.sdipco.com
Southern California Gas Company	(800) 427-2200	(800) 427-2200	www.socalgas.com
Southern Star Central Gas Pipeline	(800) 324-9696	(888) 885-6008	www.southernstar.com
Southwest Gas	(877) 860-6020	(877) 860-6020	www.swgas.com
Spire	(800) 887-4173	(205) 326-2680	www.spireenergy.com

• If you would like any additional information from a pipeline member, call or visit the links above.

COMPAÑÍA	EMERGENCIA	NO EMERGENCIA	DIRECCIÓN DE INTERNET
St. Croix Gas	(715) 425-6177	(715) 425-6177	www.stcroixgas.com
Summit Midstream	(888) 643-7929	(970) 858-3425	www.summitmidstream.com
Suncor Energy (U.S.A.) Pipeline Company	(866) 978-6267	(307) 775-8106	www.suncor.com
Tallgrass Cheyenne Connector	(877) 436-2253	(303) 763-2950	www.tallgrassenergy.com
Tallgrass East Cheyenne Gas Storage	(877) 436-2253	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Interstate Gas Transmission	(888) 763-3690	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Midstream - Powder River Gathering	(307) 687-9691	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Midstream - Redtail NGL Pipeline	(888) 763-3690	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Midstream - Wind River Gathering	(888) 763-3690	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Pony Express Pipeline	(855) 220-1762	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Powder River Gateway	(855) 220-1762	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Rockies Express Pipeline	(877) 436-2253	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Ruby Pipeline	(877) 436-2253	(303) 763-2950	www.tallgrassenergy.com
Tallgrass Trailblazer Pipeline	(877) 335-3680	(303) 763-2950	www.tallgrassenergy.com
Targa Badlands LLC	(866) 957-3133	(701) 842-3315	www.targaresources.com
Targa Northern Delaware LLC	(575) 748-4555	(575) 748-4555	www.targaresources.com
TC Energy - Bison Pipeline	(800) 447-8066	(855) 458-6715	https://www.tcenergy.com/sustainability/safety/
TC Energy - Columbia Gas Transmission	(800) 447-8066	(855) 458-6715	https://www.tcenergy.com/sustainability/safety/
TC Energy - Gas Transmission Northwest	(800) 447-8066	(855) 458-6715	https://www.tcenergy.com/sustainability/safety/
TC Energy - Keystone Pipeline LP	(866) 920-0007	(855) 458-6715	https://www.tcenergy.com/sustainability/safety/
TC Energy - Northern Border Pipeline Co	(800) 447-8066	(855) 458-6715	https://www.tcenergy.com/sustainability/safety/
TC Energy - Tuscarora Gas Transmission	(800) 447-8066	(855) 458-6715	https://www.tcenergy.com/sustainability/safety/
THUMS Long Beach Company	(562) 624-3452	(562) 624-3400	www.crc.com
Thunder Basin Pipeline LLC	(877) 478-7588	(850) 324-5453	www.slateenergy.com
Tidelands Oil Production Company	(562) 624-3452	(562) 624-3400	www.crc.com
Tidewater Terminal Company	(800) 562-1607	(360) 693-1491	www.tidewater.com
Timberland Gathering & Processing Inc.	(620) 624-3868	(620) 624-3868	www.timberlandgathering.com
Town of Aguilar	(719) 941-4360	(719) 941-4360	www.aguilarco.us
Town of Ignacio	(970) 759-3660	(970) 563-9494	http://townofignacio.colorado.gov
TransColorado Gas Transmission Co.	(800) 944-4817	(800) 276-9927	www.kindermorgan.com/public_awareness
UNEV Pipeline LLC	(877) 748-4464	(307) 328-3553	www.hollyenergy.com
United States Gypsum Company	(866) 650-6005	(503) 556-4360	www.usg.com
Urban Oil & Gas	(435) 820-9801	(435) 636-2400	www.urbanoilandgas.com
Utah Associated Municipal Power Systems	(801) 925-4008	(801) 925-4012	www.uamps.com
Utah Gas Corp	(970) 675-4482	(970) 675-4400	www.utahgascorp.com
Vantage Pipeline US LP	(800) 360-4706	(888) 428-3222	www.pembina.com
Vermont Gas Systems	(800) 639-8081	(802) 863-4511	www.vermontgas.com
Walden Gas	(970) 723-4662	(970) 928-9208	www.pinedalegas.com
Wamsutter Pipeline LLC	(307) 870-2859	(307) 212-3461	www.westernmidstream.com
Watertown Municipal Utilities	(605) 882-6233	(605) 882-6233	www.watertownsd.us
Western Midstream - Utah	(435) 781-7039	(435) 781-9733	www.westernmidstream.com
Western Midstream - Wyoming	(307) 682-9710	(307) 696-4747	www.westernmidstream.com
Westfield Gas & Electric	(413) 572-0000	(413) 572-0100	www.wgeld.org
White River Hub LLC	(800) 558-1913	(801) 647-1971	www.whiteriverhub.com
Williams Midstream - Northwest CO	(800) 635-7400	(970) 285-5512	www.williams.com
Williams Midstream - Wyoming	(800) 635-7400	(307) 872-2839	www.williams.com
Williams NW Pipeline - Eastern WA Dist.	(800) 972-7733	(509) 466-6650	www.williams.com
Williams NW Pipeline - Intermountain Dist.	(800) 972-7733	(208) 884-4300	www.williams.com
Williams NW Pipeline - Portland Dist.	(800) 972-7733	(770) 507-4203	www.williams.com
Williams NW Pipeline - Seattle Dist.	(800) 972-7733	(425) 836-4950	www.williams.com
Williams NW Pipeline - Uinta Dist.	(800) 972-7733	(435) 781-3200	www.williams.com
Williams Rocky Mountain Midstream	(877) 624-7183	(918) 573-7409	www.williams.com
Wyoming Gas Company	(307) 347-2416	(307) 335-3597	www.wyogas.com
Xcel Energy, NSP - Minnesota	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, NSP - Wisconsin	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, PSCo - Gas Distribution	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, PSCo - Gas Transmission	(800) 698-7811	(800) 895-4999	www.xcelenergy.com
Xcel Energy, SPS	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
XTO Energy - New Mexico	(575) 887-7329	(885) 218-2705	www.xtoenergy.com
XTO Energy - Oklahoma	(918) 423-0366	(580) 653-3200	www.xtoenergy.com
XTO Energy - West TX	(877) 311-1007	(806) 592-2939	www.xtoenergy.com

• Si quisiera más información sobre un miembro de tubería, llame o visite los enlaces arriba.

Resources for Excavators

Visit our website for additional training tools and resources!

pipelineawareness.org/excavator-resources



SCAN ME

CGA Best Practices

The CGA Best Practices Guide is the original industry resource for ensuring the safety of those who work or live near underground facilities.

49 CFR Part 196 - Protection of Underground Pipelines from Excavation Activity

This Federal Regulation prescribes the minimum requirements that excavators must follow to protect underground pipelines from excavation-related damage. It also establishes an enforcement process for violations of these requirements.

Download a FREE Step-by-Step Excavation Safety Checklist



SCAN ME

Free Online Training

Access FREE training from our One Call center partners.



SCAN ME

811

vs

911



Primary Responsibility: Coordinates pipelines/utility line locating and marking prior to excavation projects

During Emergencies: Can alert operators who are near but not directly involved

Contact Instructions: Call prior to excavating, grating or ditch clearing and to comply with damage reporting requirements



Primary Responsibility: Coordinates pipeline emergency notifications and initial response actions

During Emergencies: Can access pipeline maps, pipeline product information and pipeline emergency contact information

Contact Instructions: Call 911 immediately and notify the pipeline operator if you suspect a pipeline leak or witness intentional damage or pipeline vandalism

Community Liaison Services

Formerly known as the Community Assistance and Technical Services (CATS) Program

PHMSA has renamed its CATS program to “Community Liaison Services” to more appropriately align with current roles and responsibilities and better interface with various stakeholders.

Mission:

To advance PHMSA's pipeline safety mission by proactively engaging with pipeline stakeholders, providing technical expertise, and leveraging technology, data, and information to reduce pipeline risks and influence change through program and policy development.

Vision:

To serve as “trusted” and “credible” stewards of public safety and environmental protection by raising awareness and influencing change to continuously improve pipeline safety.

If you need assistance with any of the following pipeline safety related matters, please contact a PHMSA Community Liaison today:

- Pipeline safety policy/programs (damage prevention, public awareness, emergency response, PIPA, etc.)
- Pipeline stakeholder engagement and outreach
- Pipeline technical services and support (public inquiries, whistleblowers, post incident/accident communications, siting and permit initiatives)
- Questions about pipeline safety in your community

Community Liaisons are located within each PHMSA region.

Community Liaison Services Program Manager

Karen Lynch: karen.lynch@dot.gov • Phone: (202) 366-6855

Central Region:

Illinois; Indiana; Iowa; Kansas; Michigan; Minnesota; Missouri; Nebraska; North Dakota; South Dakota; Wisconsin.

Angela Pickett: angela.pickett@dot.gov • Phone: (816) 329-3823

Sean Quinlan: sean.quinlan@dot.gov • Phone: (816) 329-3800

Southern Region:

Alabama; Florida; Georgia; Kentucky; Mississippi; North Carolina; Puerto Rico; South Carolina; Tennessee.

James Kelly: james.kelly@dot.gov • Phone: (404) 990-1848

Arthur Buff: arthur.buff@dot.gov • Phone: (404) 226-6153

Eastern Region:

Connecticut; Delaware; Maine; Maryland; Massachusetts; New Hampshire; New Jersey; New York; Ohio; Pennsylvania; Rhode Island; Vermont; Virginia; Washington, D.C.; West Virginia.

Karen Gentile: karen.gentile@dot.gov • Phone: (609) 433-6650

Nita Raju: Nitander.raju@dot.gov • Phone: (609) 771-7806

Southwest Region:

Arkansas; Louisiana; New Mexico; Oklahoma; Texas.

Bill Lowry: bill.lowry@dot.gov • Phone: (713) 272-2845

James 'Jay' Prothro: james.prothro@dot.gov • Phone: (713) 272-2832

Western Region:

Alaska; Arizona; California; Colorado; Hawaii; Idaho; Montana; Nevada; Oregon; Utah; Washington; Wyoming.

Tom Finch: thomas.finch@dot.gov • Phone: (720) 963-3175

Dave Mulligan: david.mulligan@dot.gov • Phone: (720) 963-3193

PROVIDE FEEDBACK / REQUEST INFORMATION

How useful, to you, is the content contained in this edition?

Extremely Very Somewhat Not at all

Additional topics I'd like to see included in the Excavation Safety Guide are:

INFORMATION REQUEST FORM

Please complete the form below to request additional information from Pipeline Companies. Your request will be forwarded to all Pipeline Member Companies operating facilities in your State/County. Please print the information clearly in each field. All fields must be completed to process information requests.

Organization Name:

State & County:

Contact Person:

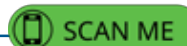
Contact Email:

Contact Phone:

Request:



After completing this form, scan or snap a pic and email it to info@pipelineawareness.org. This form may also be accessed online at <https://pipelineawareness.org/request-info> or by scanning the QR code on this page.



Pipeline Association for Public Awareness

8601 W Cross Dr PWB 302 Unit F5

Littleton, CO 80123-2200

FREE PIPELINE SAFETY TOOLBOX TALK!



SCAN ME

Looking for safety meeting topics?
We've done the prep work for you!
Share this pipeline safety information
with your team to protect your
workforce and your community.

Pipeline Association
for Public Awareness

811

TOOLBOX TALK: PIPELINE SAFETY

Pipelines and Excavation: What you need to know to work safely

- The energy transportation network of the United States consists of more than 2.5 million miles of pipelines. That's enough to circle the earth about 100 times.
- Pipelines can contain hazardous gas and liquids and are operated at high pressures. Although they do not pose a risk to the public and crews while safely moving their products under the ground, excavation and other types of disturbances like moving heavy loads over the pipelines, can have severe consequences, especially if these products are ignited. Escaping gases can also displace oxygen.
- You can protect yourself and the public by avoiding damages to buried pipelines.

4 STEPS TO SAFE DIGGING

CALL OR CLICK BEFORE YOU DIG
It's not only a best practice, but it's also the law! Call 811 or contact your local one call center to have pipelines and underground utilities marked. Many states now have online ticket options.

WAIT THE REQUIRED AMOUNT OF TIME
Generally, 2-3 business days, depending on state requirements.
Inspect the marks and ensure that all operators on the ticket have responded.

RESPECT THE MARKS
Underground utilities should be marked with permanent signage and/or temporary paint and flags. Markings are an approximate location of the facility, verify the state's tolerance zone and hand dig near the marks.

EXCAVATE WITH CARE
Pothole or hand dig to determine exact location of pipelines. Support and protect any exposed facilities. Follow any specific instructions provided by the pipeline company.

PIPELINE EMERGENCIES

Recognize Unsafe Conditions: Pools of liquid, blowing dirt, hissing sounds, vapor clouds, gaseous odors, bubbles in standing water, dead vegetation and frozen soil or ice next to a pipeline are all signs of a leak and should be treated as an emergency.

How to Respond in a Pipeline Emergency: Immediately leave the area while avoiding any action that may cause ignition. Abandon all equipment and get a safe distance away upwind. Call 911 and then immediately notify the pipeline company. Keep others away and wait for emergency officials to arrive. Stay upwind, do not attempt to repair the damaged facility, and do not attempt to operate pipeline valves or extinguish any pipeline fires.

Always Report Damage: Even a minor scrape, nick, cut, tear, break or dent needs to be reported to the facility owner immediately. This includes pipe coating and tracer wires, which are critical to protecting facilities.

SCAN ME

Download a digital copy of our Excavation Safety Guide.

PIPELINEAWARENESS.ORG/TOOLBOXTALK