

# PIPELINE

## AWARENESS

Safety Information for



Local  
Leaders



Land  
Planning



Emergency  
Management  
& Responders



### WILDFIRES & PIPELINES:

Protecting Infrastructure and Ensuring Public Safety



*By Jacob Powell, General Agricultural Extension Faculty, Assistant Professor of Practice, Oregon State University Extension Service*

While often associated with rural landscapes, the increasing risk of wildfires encroaching upon and igniting within urban environments presents unique challenges for public officials, emergency responders, and the safety of critical infrastructure. Understanding the specific intersection of urban wildfire preparedness and pipeline safety is crucial for safeguarding densely populated areas and maintaining essential energy services.

Urban wildfires, often fueled by extreme weather and overgrown vegetation in vacant lots, parks, or along utility corridors, can spread rapidly, threatening homes, businesses, and vital infrastructure. Emergency responders navigating urban environments during a wildfire need clear information about underground utility locations to ensure the safety of their personnel and the public. Limited access due to dense development and the potential for infrastructure damage necessitates meticulous planning and coordination.

**Public officials can play a key role by implementing and enforcing ordinances related to vegetation management on private and public land, particularly along pipeline rights-of-way.**

This includes managing overgrown trees, brush, fine fuels (such as grass, leaves, pine needles, tree moss, etc.), and accumulated debris that can act as fuel sources. Noxious weeds and ornamental plants in urban areas, such as scotch broom and arborvitae, can pose additional hazards due to their chemical composition.

*...continued on back*



**DOWNLOAD:**

Safety Bulletin: Fire Lines & Pipelines:  
[https://qrco.de/fire\\_line](https://qrco.de/fire_line)



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**Local Leaders**



**Land Planning**



**Emergency Management & Responders**

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**Join our email list for grant opportunities, shareable resources and more!**



# Resources for Local Officials

Scan the QR code to view Public Official Resources



## PIPELINE EMERGENCY TRAINING

Pipeline Association for Public Awareness offers free training and scenarios for fire, law enforcement and 911 center personnel online at: [https://qrco.de/Emergency\\_Training](https://qrco.de/Emergency_Training)



## PIPELINE MAPS FOR PUBLIC OFFICIALS

Register for access to the Pipeline Information Management Mapping Application (PIMMA) at: [https://qrco.de/NPMS\\_Pipelines](https://qrco.de/NPMS_Pipelines)



## PIPELINE MAPS & EVACUATION DISTANCE

Access maps that show location of pipelines and evacuation distance considerations at: [https://qrco.de/Pipe\\_Vision](https://qrco.de/Pipe_Vision)



## EVACUATION GUIDANCE

The Pipeline Association for Public Awareness provides emergency response technical guidance on when to shelter-in-place versus evacuate at: [https://qrco.de/Evacuation\\_Shelter](https://qrco.de/Evacuation_Shelter)



## PIPELINE MEMBER DIRECTORY

Access contact information for pipeline operators in your community who participate in the Pipeline Association for Public Awareness at: [https://qrco.de/PAPA\\_Members](https://qrco.de/PAPA_Members)



## Digital Publication

Download an electronic version of this publication at: [https://qrco.de/Digital\\_Newsletter](https://qrco.de/Digital_Newsletter)



## SAFETY CHECKLIST

Download an excavation safety checklist for projects near pipelines at: [https://qrco.de/Safety\\_Checklist](https://qrco.de/Safety_Checklist)

## COPIES OF MATERIALS PROVIDED TO THE GENERAL PUBLIC OR EMERGENCY RESPONSE OFFICIALS

Pipeline members will send you copies of the public awareness materials they provide to the general public or emergency officials in your area. Email your request to the company contact person listed in the Pipeline Member Directory. Access the directory at: [https://qrco.de/PAPA\\_Members](https://qrco.de/PAPA_Members)

## Pipelines in Your Community

Download in English, Vietnamese, Mandarin Chinese, Spanish, Russian, and Tagalog.



# PIPELINE RIGHT-OF-WAY

## SIX COMMON QUESTIONS

Want to know the location of pipelines in your community and the products they transport? Access to pipeline maps differs from state-to-state, but the following resources can assist public officials in requesting maps from pipeline operators and accessing available maps online.



The Pipeline Informed Planning Alliance (PIPA) provides information and resources for local officials at: [https://qrco.de/Land\\_Use](https://qrco.de/Land_Use)



### 1 What requirements are normally included in easement agreements?

Most easement agreements prohibit storing vehicles or flammable materials, require special procedures for digging and limit or prohibit building structures and planting trees on the right-of-way. Exceptions can be granted through a specific encroachment agreement with the pipeline operator.

### 2 Who maintains the pipeline right-of-way?

The pipeline operator is typically responsible for ensuring the right-of-way is visible from the air and easily accessible on the ground. Maintenance may include mowing, trimming trees or removing trees or structures.

### 3 How can I help protect people living and working near pipelines?

Planning/zoning officials, city engineers and other public officials can help prevent pipeline emergencies. Encourage builders and developers to consider the location of pipeline rights-of-way in their development plans and encourage property owners to contact 811 and notify pipeline operators before building or digging near the right-of-way.

### 4 How do I help protect important structures, foliage or animals on a right-of-way?

In most cases, issues related to existing structures, foliage or animals on or near the right-of-way are resolved before pipeline

construction and addressed within the easement agreement. If not, landowners, permitting, planning, zoning and emergency management officials should contact the pipeline operator to discuss options. This could include relocating a structure, arranging to inspect the right-of way at ground level, testing or other accommodations.

### 5 What special procedures may be needed to build roads or install utilities on an existing right-of-way?

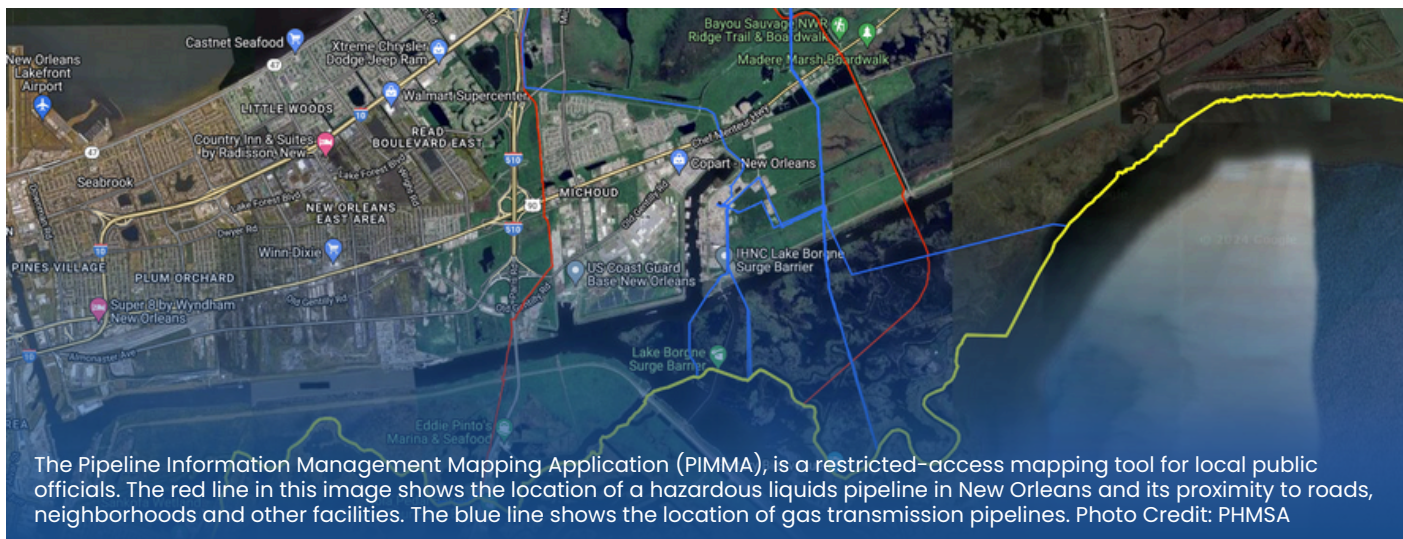
Construction plans may require hydro excavation to confirm the location of existing pipelines before installing new roads or utilities. Pipeline operators may request to be onsite during construction activity. Always contact 811 before beginning a project near an existing pipeline right-of-way even if your agency is typically exempt from state One Call requirements.

### 6 What should I know about pipelines that run under rivers, lakes, and other waterways?

Activities such as dredging, anchoring and pier installation can pose serious safety risks if conducted near these underwater pipelines. Anyone planning marine construction or working in or near a waterway should:

- Contact 811 to identify the presence of submerged pipelines.
- Coordinate with the pipeline operator before beginning work.
- Review local and federal regulations related to waterway access and construction.

Learn more at: [MarineSafe811.org](https://MarineSafe811.org)



# PIPELINE MAPS ENHANCE COMMUNITY SAFETY

Want to know the location of pipelines in your community and the products they transport? Access to pipeline maps differs from state-to-state, but the following resources can assist public officials in requesting maps from pipeline operators and accessing available maps online.

## NATIONAL PIPELINE MAPPING SYSTEM



The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides access to maps through the National Pipeline Mapping System (NPMS). Local, state, tribal and federal officials can access detailed maps of hazardous liquid and gas transmission pipelines in their jurisdiction by registering for NPMS's Pipeline Information Management Mapping Application (PIMMA). Register for PIMMA access to view maps and request mapping files at:

[https://qrco.de/NPMS\\_Pipelines](https://qrco.de/NPMS_Pipelines)

## PIPELINE ASSOCIATION FOR PUBLIC AWARENESS



The Pipeline Association for Public Awareness offers its more than 300 pipeline and utility operator members the ability to share pipeline location information with local, state and tribal officials online through the Pipelines Nearby and the password-protected PipeVision application. Access Pipelines Nearby at:

[https://qrco.de/Pipes\\_Nearby](https://qrco.de/Pipes_Nearby)

and Pipe Vision at: [https://qrco.de/Pipe\\_Vision](https://qrco.de/Pipe_Vision)

## NATIONAL ASSOCIATION OF PIPELINE SAFETY REPRESENTATIVES

National Association of Pipeline Safety Representatives (NAPSR) provides regulatory oversight for natural gas and gas utility lines in all states, and sometimes hazardous liquids pipelines and gas utility lines in all states.

NAPSR members can help state and local government officials access and request pipeline mapping information for their jurisdiction. Contact your state's NAPSR program manager for assistance requesting pipeline maps and for access to state-specific resources at:

<https://qrco.de/NAPSR>

## STATE ONE CALL CENTERS



The 811 system and state One Call centers are a hub for connecting public works departments, community planners and other local and tribal officials with pipeline location information. Learn more about 811 in your state at:

[https://qrco.de/One\\_Call\\_Law](https://qrco.de/One_Call_Law)

# PIPELINE MAPS & INFORMATION TOOLS



Pipeline maps are available to local emergency and public officials in a variety of online resources. The table below compares features and information available through four different information sources for local public and emergency officials. Pipeline operators are always the best resource for information about their lines in your community.

Information & Features	Public Viewer <sup>1</sup>	PIMMA <sup>1</sup>	PIPEVISION <sup>2</sup>	Pipeline Markers <sup>3</sup>
Includes evacuation distance guidance			✓	
GIS data files available for request		✓		
Includes operator emergency contact information		✓	✓	✓
Includes operator non-emergency contact information	✓	✓	✓	
Includes pipeline product information	✓	✓	✓	✓
Identifies location of transmission pipelines	✓	✓	✓	✓
Identifies location of distribution mains			✓	✓
Identifies location of gathering pipelines			✓	✓
Identifies location of offshore pipelines	✓	✓		✓
Allows local officials to help operators locate identified sites <sup>4</sup> near pipelines in their community		✓	✓	✓
Password-protected access to data		✓	✓	
Data is available for the public	✓			✓

1. Public Viewer and PIMMA are managed by the Department of Transportation's Pipeline and Hazardous Material Safety Administration as part of the National Pipeline Mapping System (NPMS). Information in NPMS is updated annually and limited to transmission pipelines.

2. PipeVision is managed by the Pipeline Association for Public Awareness. PipeVision is limited to data submitted by members of the Association.

3. Pipeline markers indicate the approximate, but not exact location of underground lines. Permanent pipeline markers are located along transmission pipelines, but they may not be located continuously along gathering, distribution or offshore pipelines.

4. "Identified Sites" refers to indoor or outdoor places near a pipeline where a large number of individuals regularly gather (i.e. parks, stadiums, shopping malls, etc.)

**WEBINAR**

## ATTENTION LOCAL EMERGENCY & PUBLIC SAFETY OFFICIALS

PAPA is honored to sponsor a LIVE training opportunity featuring the National Pipeline Mapping System.

In this dynamic webinar, you'll discover how to:

- **Quickly access and interpret online pipeline maps – vital for planning, response, and public safety**
- **Request official mapping files to integrate directly into your agency's systems**
- **Unlock enhanced access to sensitive pipeline data reserved exclusively for verified public safety professionals**

This training equips you with critical tools to protect your community and stay one step ahead.

**October 30, 2025**  
**12 PM MT - FREE (Virtual)**

**REGISTER:**  
**PIPELINEAWARENESS.ORG/WEBINARS**

# LESSONS LEARNED FROM A MAJOR PIPELINE STRIKE IN WASHINGTON



## ***In November 2023,***

Williams Northwest Pipeline experienced a significant 3rd party line strike incident that resulted in a pipeline rupture of a 12-inch transmission lateral near Pullman, WA. The incident occurred while a farmer was installing drain tile in a leased field. This unfortunate and preventable event led to a large-scale Natural Gas service outage affecting Williams' customer Avista. Approximately 37,000 services were lost.

## **Impact and Response**

Fortunately, no one was injured during the incident. Williams Northwest Pipeline responded promptly, quickly isolated the damaged pipeline and repaired it within approximately 24 hours. However, it took several days to fully restore service to thousands of residents in the affected region. Eight utility companies from several neighboring states provided mutual aid and assisted in the restoration of service.

## **Safety Reminder**

This unfortunate and preventable incident underscores the critical importance of calling 811 before beginning any work that disturbs the soil. Whether you're a farmer, rancher, contractor, excavator, homeowner, or anyone else, it's essential to ensure safety by allowing pipelines and utility companies to mark buried lines. Had 811 been called, this incident could have been prevented. Utilizing 811 not only saves lives but also prevents large-scale outages like this one.

## **Key Takeaways for Public Officials and First Responders**

The United States has over 2.5 million miles of pipelines, most of which are buried underground, transporting natural gas, crude oil, and other petroleum products. These pipelines, (many of which are buried in farm fields and ranches) are crucial to the nation's energy infrastructure. Pipelines are a safe and reliable way to transport energy. Preventing third party line strikes by calling 811 before you dig ensures safe and reliable transportation.

Williams, like most pipeline operators, collaborates closely with interconnected customers to prepare for such incidents. Just weeks before the event, Williams and Avista had conducted a joint mock drill exercise, which contributed to a successful and timely response. Engaging local first responders and emergency response officials in mock training drills with pipeline operators ensures the best possible outcome in the event of an actual incident.

## **Emergency Responder Do's and Don'ts**

- **Don't** ever shut a valve on a transmission or distribution pipeline as doing so could make a dangerous situation worse.
- **Do** get to know your local pipeline operators and participate in joint training exercises.
- **Do** work together with utility operators – should you have to respond to a pipeline emergency, make sure the incident is secured and perform evacuations as necessary while the operator isolates the pipeline and makes it safe.

## **Conclusion**

This incident underscores the critical importance of safety and vigilance in pipeline operations especially during agricultural activities/excavations. Close collaboration between operators, farmers, excavators, and anyone else disturbing the soil is essential to maintaining safe, reliable operations and protecting communities. Williams Northwest Pipeline is dedicated to ensuring the safety and reliability of its pipeline and is continuing to work closely with local communities to prevent future incidents.



# PLANNING WITH PURPOSE: SAFE DEVELOPMENT NEAR PIPELINES

*Sponsored by the Pipeline Association for Public Awareness*

As cities and rural areas grow, the overlap between land development and pipeline infrastructure becomes increasingly important. With over 2.5 million miles of pipelines transporting gas and hazardous liquids across the U.S., thoughtful planning helps ensure community safety and resilience.

Development near pipelines doesn't have to be complicated or risky. With early coordination and informed planning, communities can grow safely and sustainably around vital infrastructure.

## Why It Matters

Pipelines power our lives but can pose serious risks if damaged. Incidents are rare—but high consequence. Early planning around pipeline rights-of-way (ROWs) helps communities avoid future hazards and delays.

## The Role of Local Officials

Local leaders have the authority to shape how land is used—but many don't yet consider pipeline proximity. Engaging with pipeline operators early provides key data:

- Pipeline location and product type
- Hazards and access requirements
- Recommended buffer zones

## Use 811 for Planning, Not Just Digging

Many states offer "planning" or "meet" tickets through 811 centers. These allow developers to consult utilities in the early design phase—before excavation begins. If your state doesn't offer this, contact pipeline operators directly through the National Pipeline Mapping System (NPMS), PAPA, or PHMSA's Community Liaison Services program.

## Safe Development Checklist Highlights

- ✓ Identify pipeline locations with NPMS or PIMMA
- ✓ Contact operators early and often
- ✓ Include pipeline safety in zoning codes and site plans
- ✓ Educate contractors on ROW restrictions
- ✓ Coordinate with emergency responders

## Unified Safety

Federal and state agencies regulate pipeline safety. Local governments oversee development. When all parties work together—developers, pipeline operators, and emergency responders—communities benefit from clarity, access, and peace of mind.

## Bringing Everyone Together

Each group holds a piece of the safety puzzle. By starting with a simple call or planning ticket, we can build vibrant, protected communities together.

[https://qrco.de/Land\\_Use](https://qrco.de/Land_Use)

# EXCAVATION SAFETY

## TIPS FOR PUBLIC WORKS, MUNICIPAL & COUNTY OFFICIALS

Public Works and other municipal excavation activities often require coordination with pipeline and utility companies. Encourage work crews to adopt the following critical safety steps when excavating near underground lines.



## ALWAYS CALL OR CLICK 811 BEFORE DIGGING

Call or click 811 or contact your state's One Call center at least 2-3 days before digging, grating or excavating in compliance with state law to request a "dig ticket." For large or unusual projects, request planning, design and meet tickets before starting your project. These tickets are available in most states and can be requested during the project planning phase.



## PRE-MARK THE AREA & WAIT FOR OPERATORS TO MARK LINES

Identify the excavation area for line locators by pre-marking or white-lining using white marking paint. Wait to start your job until all pipeline and utility operators mark the location of their lines or indicate "all clear."



## DIG WITH CARE & BACKFILL PROPERLY

Dig with care using appropriate hand and vacuum-digging tools near pipelines and utility lines. Backhoes, augers and other mechanical equipment should not be used to expose underground lines. Maintain temporary flags, stakes or paint marks until you have finished digging. If you expose a pipeline, a pipeline or utility representative will typically request to be onsite to inspect the pipe before you backfill and compact the soil.



## REPORT DAMAGE OR LEAKS

If a pipeline is dented, scraped or damaged while digging or you suspect a pipeline leak, immediately leave the area and warn others to stay away. From a safe location, call 9-1-1 and notify the pipeline or utility owner. In some states, you may be required to also notify the One Call center. Do not operate mechanical equipment in an area where you suspect a leak.



# KNOW THE HAZARDS

## PRODUCTS AND FACILITIES SAFETY INFORMATION FOR PUBLIC OFFICIALS



Scan here for our  
Emergency  
Response Checklist

### 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 (H<sub>2</sub>S) 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.

# LEAK, HAZARD & EMERGENCY RESPONSE INFORMATION

## INDICATIONS OF A LEAK

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: [https://qrc0.de/Evacuation\\_Shelter](https://qrc0.de/Evacuation_Shelter)

# SAFETY IS NOT OPTIONAL: A MESSAGE TO LOCAL GOVERNMENTS ABOUT WORKER SAFETY NEAR PIPELINES

By Billy Cleveland, Owner, Dynasty Construction, and Member of the Mississippi Underground Facilities Damage Prevention Board

As cities and counties expand broadband, utilities, and infrastructure projects, more municipal workers and local contractors are working near pipelines and underground utilities. Whether employees are part of a public works team or contracted to support a community project, their safety must be non-negotiable.

Billy Cleveland, a seasoned HDD professional and safety advocate, reminds us that safety isn't something that begins when the workday starts—it begins before anyone sets foot on the job site.

"Daily safety meetings and weekly trainings were essential to ensure our reputation for getting the job done safely and on time. We believed safety was, and is, a personal responsibility of each person on the job site."

For local jurisdictions, this level of care starts with preparation and continues with consistent safety practices. It includes clear communication with contractors, alignment on responsibilities, and strong enforcement of safety standards.

"My conviction is that you don't start thinking about working safely and protecting one another when you arrive at the job. It is something we expect our employees to have when they get up to start the day. Arriving safely at the job site is just as important as working safely at the job site."

## Local Policy Tips to Strengthen Worker Safety

- Include safety clauses in RFPs and contracts: Require documentation of 811 calls, safety plans, and utility coordination
- Develop a pipeline safety protocol for city staff that mirrors best practices in utility construction
- Partner with pipeline operators and utility locators for annual training sessions
- Designate a safety liaison within public works or emergency management to oversee excavation projects near pipelines
- Utilize 811 Day (August 11) and Safe Digging Month in April to conduct community outreach, contractor education, and hands-on demos

"Contractors want to make a good living, and we are doing what we like to do. Most of our employees become our friends and extended families. I would never ask them to do anything that risks their health or their lives."

Local governments and emergency officials can play a pivotal role in reinforcing safe work environments. Worker safety near underground infrastructure isn't just about compliance—it's about community care and leadership.

"We want them to respect all underground utilities, to look out for one another, and to set a safety standard that teaches everyone around them the importance of making good choices."

## Quick Safety Checklist for Cities & Counties

1. Call 811 before any excavation begins
2. Require pre-job safety meetings for city workers and contractors
3. Ensure all facilities on the One Call ticket are located and marked
4. Stop work if a utility is not marked or unclear—call 811 and/or the operator
5. Provide basic pipeline awareness training to all field staff
6. Require PPE and site-specific safety plans on all excavation sites
7. Make utility maps accessible to public works teams and emergency responders



# WHEN EVERY SECOND COUNTS: NAVIGATING THE TOUGHEST CALL IN PIPELINE EMERGENCIES

An Interview with HAZMAT Expert and Retired Fire Officer, Mike Callan

When disaster strikes and hazardous materials are released from a pipeline, emergency responders must make a critical decision: Should people evacuate or shelter in place? It's a choice that can mean the difference between safety and tragedy—and it must be made quickly, often with limited information.

To help guide emergency officials and the public through this complex terrain, we sat down with Mike Callan, a former emergency responder and current emergency response trainer and consultant. With decades of experience on both sides of the pipeline—working with operators and first responders—Mike offered candid insights into the realities behind one of the hardest decisions in emergency response.

***"If you tell people to run and they get hurt, they'll likely still say you did a good job. But if you tell them to stay and they get hurt, you're in trouble."* —Mike Callan**

## The Weight of the Decision

Mike shared that the choice to evacuate or shelter-in-place often boils down to two core hazards: **energy** and **exposure**. If there is a threat of explosion or fire—a high energy hazard—evacuation may be necessary. But if the threat is a toxic gas that could disperse in the air, sheltering-in-place may be the safer option, especially if evacuating would increase exposure.



## Key Factors to Consider

Emergency officials must consider several elements before making the call:

- **Wind direction:** Always stay upwind of a release if possible.
- **Topography:** Low-lying areas can trap gas clouds; responders must understand the landscape.
- **Chemical properties:** Some substances, like hydrogen sulfide or anhydrous ammonia, have strong odors that can warn of danger, but their concentration and behavior can be unpredictable.
- **Adequacy of shelter:** Not every building offers the same protection. Knowing which structures can truly provide safety is essential.

Mike emphasized the importance of pre-planning: ***"You need to know the pipelines in your community, what's in them, and who to call."***



**DOWNLOAD:**

Critical Information for Emergency Preparedness:  
[https://qrco.de/Emergency\\_Preparedness](https://qrco.de/Emergency_Preparedness)



Free pipeline emergency training is available at: [pipelineawareness.org/training](https://pipelineawareness.org/training)

# WHEN EVERY SECOND COUNTS: NAVIGATING THE TOUGHEST CALL IN PIPELINE EMERGENCIES

## Clouds and Odors: The First Clues

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*Upon arrival, visual and sensory cues are critical. "Clouds are bad. Colored clouds are worse," Mike said, noting that visible vapor often indicates a sizable release. Odors—especially those with added warning agents like mercaptan in natural gas—can be a helpful indicator but should never be the sole factor in decision-making. Other odors are difficult because the public truly doesn't understand odors. "Very often we responded to the 'odor of Carbon Monoxide (D)' when technically, CO has no odor. But odors are important. It maybe the first clue, paraphrasing a warning, 'If you smell something, tell someone.'"*

### 1 The Role of Communication

Perhaps the most powerful insight Mike shared was the importance of clear, trusted communication. **"Communication leads to cooperation. Cooperation leads to coordination."**

First responders are the voice the public trusts in crisis. Having a police officer or firefighter at the door advising shelter-in-place carries more weight than a company representative, especially in moments of fear.

He also emphasized the value of drills and tabletop exercises. "If I know the guy's name, I'm in good shape," he said, advocating for ongoing relationship-building between responders and operators.

### 2 Training and Tools

Understanding monitoring tools—like meters that measure parts per million—is crucial. But as Mike pointed out, it's not enough to have the tools; responders need to know how to interpret them and make rapid decisions based on what the instruments are saying.

### 3 Lessons from the Past, Tools for the Future

The concept of sheltering-in-place gained national attention after a deadly ammonia release in Texas, where those who stayed in their cars survived. Mike reminded us that history offers critical guidance, and each incident adds to the collective wisdom.

As Hydrogen and Carbon Dioxide (CO<sub>2</sub>) pipelines expand across the U.S., responders will face new challenges. That's why proactive training, strong local relationships, and practical experience are more vital than ever. Hydrogen is lighter than air and flammable, CO<sub>2</sub> is heavier than air and an asphyxiant.

#### Moving Forward

Train together, communicate openly, and never forget that every emergency starts small. It becomes a disaster only when the response fails to match the moment.



**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, grading or ditch clearing and to comply with damage reporting requirements

# VS



**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

# 24/7 UTILITY SAFETY



Pipeline Association  
for Public Awareness

[pipelineawareness.org/247safety](http://pipelineawareness.org/247safety)



## Aerial Patrols

Operators regularly survey their pipeline rights-of-way from the sky



## Ground Patrols

Operators monitor their pipelines from the ground and respond to potential issues along their rights-of-way



Click  
Before  
You Dig

## One Call

One Call centers communicate with utility locators after a One Call ticket has been submitted so appropriate utilities are properly marked before excavation

## Communicating with Neighbors

Operators regularly communicate with the community and their customers about safety around their pipelines and facilities

## In-Line Inspection

Technology allows operators to monitor their utilities from the inside out



## Pipeline Integrity

Pipelines are rigorously inspected and tested to ensure they are operating safely. Pipeline pressure, movement, vibration, and temperatures are analyzed

## Preventative Maintenance

If in-line inspections identify anything abnormal, pipelines are exposed, examined, and if necessary, repairs are made



**SHARE WITH YOUR  
COMMUNITY**

# PIPELINES IN YOUR COMMUNITY

Gathering, transmission and distribution pipeline networks safely transport natural gas, gasoline, crude oil and other energy products across the country and to homes and businesses in your community. Gathering lines transport natural gas and other energy products from production sites to processing facilities and connect to transmission lines that carry energy products from one part of the state to another and across the country. Distribution lines are located throughout communities and connect to homes and businesses.



## PIPELINE MAPS

Use the National Pipeline Mapping System, [npms.phmsa.dot.gov/](https://npms.phmsa.dot.gov/) or Pipelines Nearby [pipelinesnearby.org](https://pipelinesnearby.org) to learn more about the pipelines in your community. Pipeline and utility operators also maintain maps of their pipeline system.



## PIPELINE MARKERS & METERS

Pipeline markers and gas meters identify the general location of underground pipelines. Markers include the pipeline operator's name, emergency number and product transported. Some but not all distribution lines are identified by pipeline marker signs including curb markers. Gathering lines are generally located in rural areas and may or may not be identified with permanent pipeline markers.



## SUSPECT A PIPELINE LEAK?

If you suspect a pipeline leak, leave the area, call 9-1-1 and notify the pipeline or utility operator. Do not operate any device that might cause a spark near a pipeline leak.

### Signs of a leak can include:

- Smell of "rotten eggs" (if odorant is added) or a chemical smell
- Hissing, whistling, or roaring sound near pipeline or gas appliance
- Sheen on water or continuous bubbling, dying vegetation, dirt spraying in air



## KEEPING PIPELINES SAFE

Pipeline and utility operators protect underground lines and host communities through employee training, regular maintenance and testing, corrosion protection, system monitoring, cybersecurity protocols and inspections to check for leaks or other damage. Operators also conduct regular maintenance activities within the pipeline easement, including mowing, trimming and tree removal. Pipeline Integrity Management plans are available for review and outline an operator's ongoing safety and maintenance activities.



## EMERGENCY RESPONSE COORDINATION

A pipeline leak can ignite or contaminate water or soil. While first responders secure the area, assess the scene and respond to immediate medical and safety needs, pipeline and utility personnel will restrict the flow of gas or other products and will take action to minimize the impact of the emergency and protect the public. Public safety personnel should not attempt to operate pipeline valves.



## ALWAYS CONTACT 811 BEFORE DIGGING

Call or click 811 to request a "dig ticket" at least 2-3 days before starting work in compliance with state law. Wait until all lines are marked and dig with care using non-mechanical tools near underground lines. If a pipeline is damaged, immediately report the damage from a safe location. For more information, visit [clickbeforeyoudig.com](https://clickbeforeyoudig.com) or [call811.com](https://call811.com).



This page is available in English, Vietnamese, Mandarin Chinese, Spanish, Russian, and Tagalog.  
[https://qrco.de/Community\\_Pipe](https://qrco.de/Community_Pipe)



# PIPELINE MARKER ANATOMY



REMINDER THAT SIGNS ARE PROTECTED BY FEDERAL LAW



WARNING TO WORK NEAR PIPELINES WITH EXTREME CAUTION



NAME OF PRODUCT TRANSPORTED



NAME OF THE PIPELINE OPERATOR



EMERGENCY PHONE NUMBER



REMINDER TO ALWAYS CALL OR CLICK 811 BEFORE DIGGING



## WHAT TO KNOW

- Pipeline markers **vary in size, shape and color**, but always include common information about the pipeline or utility line.
- Pipeline markers **do not** identify the exact location, depth or number of pipelines in the area.
- Pipelines **do not** always run in a straight line between markers.
- Pipeline markers are located along transmission pipelines, but they **may not** be located continuously along gathering or distribution lines.
- Pipeline markers **are not** typically used to identify the location of natural gas service lines that connect directly to homes or businesses.
- Pipeline markers **are protected by federal law**, and intentionally damaging or removing one can result in a fine.
- Report missing or damaged pipeline markers to the pipeline operator so they **can be replaced**.

## REQUEST INFO

We want to hear from you. Contact us online or by email to request additional information from pipeline companies. Your request will be forwarded to all pipeline member companies operating facilities in your state/county.

### ONLINE

[pipelineawareness.org/request-info](https://pipelineawareness.org/request-info)

### EMAIL

[admin@pipelineawareness.info](mailto:admin@pipelineawareness.info)



## FEEDBACK

Complete a short survey and tell us what you found useful in this publication and any topics you'd like us to include in the future.  
<https://qrco.de/2025-survey>



Pipeline Association  
for Public Awareness

## SAFETY TOOLKIT



Share social media posts to educate your community on how to live and work safely near critical pipelines in your community:  
[https://qrco.de/social\\_share](https://qrco.de/social_share)



### SAFETY TIP:

Integrate utility safety awareness into community outreach programs, educating residents on the importance of 'Call Before You Dig' and fostering a culture of shared responsibility for utility protection.

## ONE CALL LAW UPDATES

State-specific One Call laws outline requirements for notification systems and set standards for locating and marking pipelines and underground facilities. This guide, produced by the Pipeline Association for Public Awareness, includes updates on laws in 25 states.

[https://qrco.de/One\\_Call\\_Law](https://qrco.de/One_Call_Law)



## PRE-EXCAVATION CHECKLIST

Download in **English** or **Spanish** for projects near pipelines.



English:  
[https://qrco.de/EN\\_Checklist](https://qrco.de/EN_Checklist)



Spanish:  
[https://qrco.de/SPA\\_Checklist](https://qrco.de/SPA_Checklist)

...continued from cover

Well-maintained green spaces and strategically placed fuel breaks within urban areas can help slow fire spread and provide safer zones for firefighters. In addition, extreme fire weather such as high winds during dry and hot conditions makes it easier for wildfires to burn in urban areas. The Marshall Fire in Colorado in December 2021 burned through houses and businesses in the suburbs outside of Boulder due to sustained winds of 60 to 100 mph coupled with six months of drought. It is critical that public officials stay informed on current weather and issue alerts when red flag fire conditions or high winds are forecasted.

Heavy smoke in urban wildfires can severely impact visibility, complicating evacuation efforts and hindering aerial support. Power outages can disrupt essential services and potentially affect pipeline monitoring and control systems. **Robust communication protocols between emergency responders, utility operators, and public officials are vital to ensure a coordinated response.** Knowing the location of underground pipelines before any excavation during or after a fire event is paramount to prevent accidental damage in the chaotic aftermath.

### Urban residents and businesses also have a crucial role in wildfire preparedness, including:

- Maintaining clear defensible space around their properties
- Having emergency preparedness kits
- Understanding evacuation plans are essential

**Public awareness campaigns spearheaded by local officials can educate the community about wildfire risks in urban settings and the importance of reporting overgrown vegetation or potential hazards.**

For public officials, emergency responders, and utility operators, joint training exercises that simulate urban wildfire scenarios near pipeline infrastructure can significantly improve coordination and safety. Pipeline operators can provide essential information about their facilities, emergency procedures, and potential risks.

**Wildfire preparedness in urban environments demands a proactive and collaborative approach. We can collectively protect our urban communities and vital pipeline infrastructure from the growing threat of wildfire by:**

- Implementing effective vegetation management policies
- Fostering clear communication between all stakeholders
- Prioritizing pre-incident planning

Joe Wertz and Veronica Penney, *We Now Know Lightning Didn't Spark the Marshall Fire, But Not Much Else is Publicly Known About the Investigation*, Colorado Public Radio, January 26, 2022, <https://www.cpr.org/2022/01/26/marshall-county-cause-investigation-boulder-county/>



**DOWNLOAD:** Critical Information for Emergency Preparedness:  
[https://qrco.de/Emergency\\_Preparedness](https://qrco.de/Emergency_Preparedness)



## BEST PRACTICES: UNDERGROUND SAFETY & DAMAGE PREVENTION

The Common Ground Alliance provides free access to best practices for underground safety and damage prevention. Download a copy at: [https://qrco.de/BP\\_CGA](https://qrco.de/BP_CGA)



## ONE CALL REQUIREMENTS

Download a summary of One Call requirements for all states at:  
[https://qrco.de/One\\_Call\\_Law](https://qrco.de/One_Call_Law)

