pipeline awareness

Safety Information for ▸ Local Leaders | Community Planning | Emergency Management

Black Hills Energy requested mutual aid assistance from Xcel Energy, other neighboring utilities and local law enforcement to support system shutdown and restart activities in Aspen, Colo. in December 2020. The system shutdown was triggered by attempts to vandalize and disrupt gas service to customers in Aspen.

Mutual Aid Key to Aspen Incident Response

RECENT PIPELINE EMERGENCIES PROVIDE GUIDANCE FOR IMPROVING PUBLIC SAFETY

In December 2020, Black Hills Energy proactively shutdown, purged and restarted their Aspen, Colo. gas system after identifying a drop in system pressure. The company's investigation determined that system safety was compromised at several aboveground facilities by individuals attempting to illegally operate pipeline equipment.

Extreme weather, COVID protocols and holiday schedules complicated efforts to restore service. But existing mutual aid agreements and support from nearby gas utilities and local emergency response agencies helped Black Hills Energy quickly distribute heaters, provide access to temporary housing and restore gas service to critical facilities and approximately 3,200 residential and commercial customers.

The Federal Bureau of Investigation (FBI) recently issued a pipeline sector advisory to increase awareness of suspicious behavior near critical pipeline infrastructure and to promote information-sharing between pipeline operators and local law enforcement. The FBI, Pitkin County Sheriff Department and Aspen Police Department are investigating the incident.

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The Pipeline Awareness Newsletter is published annually by:

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8601 W Cross Dr PMB 302 Unit F5
Littleton, CO 80123-2200
www.pipelineawareness.org

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 **bit.ly/PAPA-Members .**

Resources for Local Officials

PIPELINE EMERGENCY TRAINING

The Pipeline Association for Public Awareness offers **free training and scenarios** for fire, law enforcement and 911 center personnel online at **bit.ly/PAPA-Training.**

ONE CALL REQUIREMENTS

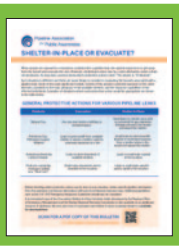
Download a summary of One Call requirements for all states at **bit.ly/One-Call-Laws.**

PIPELINE MAPS FOR PUBLIC OFFICIALS

Register for access to the Pipeline Information Management Mapping Application (PIMMA) at **bit.ly/AccessPIMMA.**

EVACUATION GUIDANCE

The Pipeline Association for Public Awareness provides emergency response technical guidance on when to shelter-in-place versus evacuate at **bit.ly/Shelter-Evacuate.**



PIPELINE MEMBER DIRECTORY

Access contact information for pipeline operators in your community who participate in the Pipeline Association for Public Awareness at **bit.ly/PAPA-Members.**

Download an electronic version of this publication at **pipelineawareness.org/newsletter.**

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If you have questions about the Pipeline Association for Public Awareness, our programs or need more information from any of our members, please visit **pipelineawareness.org**.

Pipeline Association *for* Public Awareness

PIPELINE MAPS

The red line in this image shows the location of a hazardous liquids pipeline in California and its proximity to specific roads, neighborhoods and critical facilities. Photo Credit: PHMSA

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 **bit.ly/AccessPIMMA.**

NATIONAL ASSOCIATION OF PIPELINE SAFETY REPRESENTATIVES

National Association of Pipeline Safety Representatives (NAPSR) provide regulatory oversight for natural gas and hazardous liquids pipelines and gas utility lines in their state.

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 **bit.ly/NAPSR-Resources.**

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 planning, design and meet tickets at **bit.ly/One-Call-Tickets.**

PIPELINE ASSOCATION 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 password-protected Identified Site & Emergency Planning Application (ISEPA). Member contact information is available at **bit.ly/PAPA-Members.** Access Pipelines Nearby at **bit.ly/PipelinesNearby** and ISEPA at **bit.ly/PAPA-ISEPA.**

LIVE FREE MAPPING WEBINAR

Join your peers for a training webinar led by the National Pipeline Mapping System team.

DATE
Tuesday,
October 11, 2022
2 – 3:30 p.m. ET

REGISTER

REGISTER
pipelineawareness.org/webinars

DID YOU KNOW?

The Pipeline Information Management Mapping Application (PIMMA) provides access to downloadable GIS layers of the transmission pipelines in your area.

The Pipeline Information Management Mapping Application (PIMMA) includes pipelines located in tribal nations.

Access PIMMA, the PIMMA iPhone app and other NPMS resources at **bit.ly/PHMSA-NPMS.**

» CONTINUED FROM PAGE 1

Pipeline Incident Lessons Learned

Aspen Incident Takeaways:

- Pipeline system vandalism and equipment tampering can cause system outages and serious accidents.
- Pipeline and utility operators promote "See Something. Say Something." campaigns encouraging the public to contact 911 if they see suspicious activity near a pipeline facility.

- The FBI's advisory notice includes instructions for securing the scene and reporting to law enforcement. The FBI definition of "suspicious activities near critical pipeline infrastructure" includes information requests, damage to fencing or locks and objects left near facilities.

ETHYLENE LEAK TRIGGERS SHELTER-IN-PLACE

An ethylene pipeline leak in December 2021 created a **flammable vapor cloud** that drifted toward roads and residential homes in southwestern Jefferson County, Texas.

In response, Chevron Pipe Line closed a segment of the line and initiated response activities. The Texas Department of Public Safety (DPS) **closed roads and rerouted traffic**, Jefferson County emergency management issued a shelter-in-place order for residents within a one-mile radius of the leak, and the Texas Commission of Environmental Quality provided **air monitoring** during emergency response and repair activities.

News reports indicate that the shelter-in-place notice, which continued for almost 24 hours, was expanded from 100-yards to one-mile due to limited nighttime visibility.

Ethylene Incident Takeaways:

- Emergency management decisions to evacuate or shelter-in-place require familiarity with the location of pipelines, products transported, potential hazards and other factors including visibility, weather and topography.
- Emergency response agencies should be familiar with shelter-in-place protocols and how to communicate shelter-in-place notices with residents during a pipeline emergency.

HARBOR ACCIDENT CALLS ATTENTION TO PIPELINES IN COASTAL AREAS & WATERWAYS

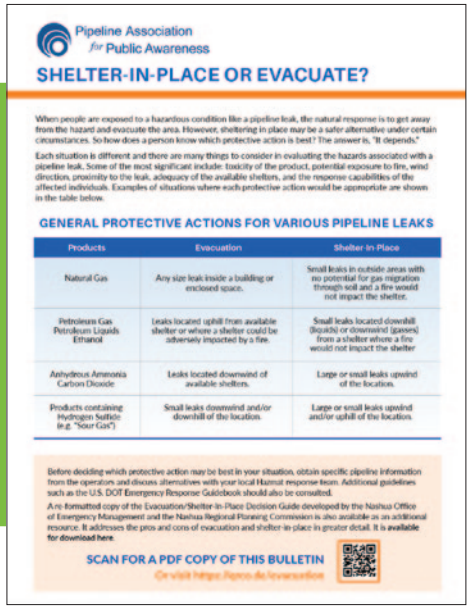
In August 2020 a dredging vessel damaged a propane pipeline in the Ship Channel Inner Harbor in Corpus Christi, Texas. Damage to the pipeline caused a fire and explosion that killed five people and seriously injured five more.

The National Transportation Safety Board (NTSB) concluded that dredging operator's policies and procedures were insufficient to managing the risk associated with excavating near pipelines. NTSB also noted that marine dredging

SHELTER-IN-PLACE OR EVACUATE?

The Pipeline Association for Public Awareness recently published a technical reference guide to help emergency planning officials and emergency response agencies evaluate when to shelter-in-place and when to evacuate residents and businesses in response to a pipeline leak.

The one-page reference guide also includes a link to additional information including emergency response checklists for both scenarios created as part of a project funded by the US Department of Transportation Pipeline and Hazardous Materials Safety Administration. Download the guide at **bit.ly/Shelter-Evacuate.**


Pipeline Association for Public Awareness

SHELTER-IN-PLACE OR EVACUATE?

When people are exposed to a hazardous condition like a pipeline leak, the natural response is to get away from the hazard and evacuate the area. However, sheltering in place may be a safer alternative under certain circumstances. So how does a person know which protective action is best? The answer is, "It depends."

Each situation is different and there are many things to consider in evaluating the hazards associated with a pipeline leak. Some of the most significant include: toxicity of the product, potential exposure to fire, wind direction, proximity to the leak, adequacy of the available shelters, and the response capabilities of the affected individuals. Examples of situations where each protective action would be appropriate are shown in the table below.

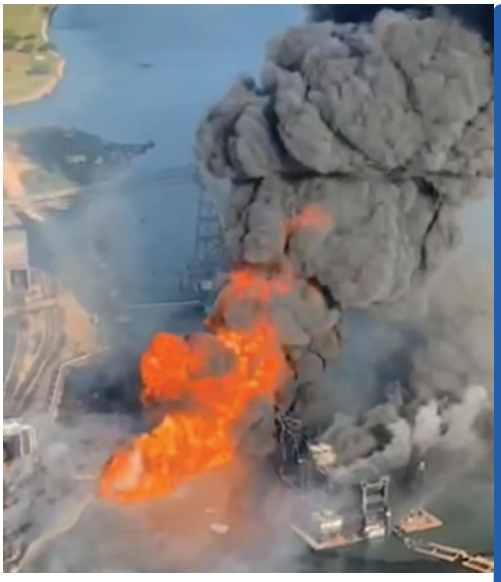
GENERAL PROTECTIVE ACTIONS FOR VARIOUS PIPELINE LEAKS

Products	Evacuation	Shelter In Place
Natural Gas	Any size leak inside a building or enclosed space.	Small leaks in outside areas with no potential for gas migration through soil and a fire would not impact the shelter.
Petroleum Gas Petroleum Liquids Ethanol	Leaks located uphill from available shelter or where a shelter could be adversely impacted by a fire.	Small leaks located downhill (liquids) or downwind (gases) from a shelter where a fire would not impact the shelter
Anhydrous Ammonia Carbon Dioxide	Leaks located downwind of available shelters.	Large or small leaks upwind of the location.
Products containing Hydrogen Sulfide (e.g. "Sour Gas")	Small leaks downwind and/or downhill of the location.	Large or small leaks upwind and/or uphill of the location.

Before deciding which protective action may be best in your situation, obtain specific pipeline information from the operators and discuss alternatives with your local Hazmat response team. Additional guidelines such as the U.S. DOT Emergency Response Guidebook should also be consulted.

A re-formatted copy of the Evacuation/Shelter-In-Place Decision Guide developed by the Nashua Office of Emergency Management and the Nashua Regional Planning Commission is also available as an additional resource. It addresses the pros and cons of evacuation and shelter-in-place in greater detail. It is available for download here.

SCAN FOR A PDF COPY OF THIS BULLETIN



A dredging boat cut through a propane pipeline causing a fire and explosion in Corpus Christi, Texas in December 2021.
Photo Credit: United States Coast Guard

projects require a greater level of collaboration between pipeline operators and dredging companies than the current One Call process facilitates.

NTSB issued 10 recommendations designed to encourage greater coordination between pipeline operators and dredging companies, improved marking requirement, establishment of larger tolerance zones within state One Call laws related to dredging and improved training and risk management procedures for dredging operators. Read the full NTSB report at **bit.ly/NTSB-Dredging-Accident.**

Dredging Accident Takeaways:

- State lawmakers are encouraged to review language in their state's One Call law regarding tolerance zones for excavation in coastal area and waterways.
- Planning and permitting officials can support collaboration and information sharing between dredging companies and pipeline operators as part of their permitting process.The Pipeline Informed Planning Alliance (PIPA) provides consulting meeting templates and recommendations for permitting officials at **bit.ly/PHMSA-PIPA-Resources.**

BEST PRACTICE SPOTLIGHT

STATE AND LOCAL OFFICIALS PRIORITIZE PIPELINE EMERGENCY PREPAREDNESS

Coordinated pipeline emergency response involves planning, training and practice. This article features a local, state and tribal agency and how they are organizing drills, sponsoring training and leading planning meetings to improve pipeline emergency preparedness.

UTAH

The Hazardous Materials Section of the Utah State Fire Marshal's Office hosts in-person continuing education courses focused on pipeline emergency response for fire and police departments, highway patrol, city planners and emergency managers in partnership with the Utah Pipeline Association.

Training is conducted at locations across the state and provides the opportunity to collaborate with local pipeline company representatives. **For more information, email adeyo@utah.gov.**

HONOLULU COUNTY, HAWAII

Each year, Honolulu County's Local Emergency Planning Committee (LEPC) dedicates a standing meeting to pipeline emergency preparedness. The LEPC reviews the location of local pipelines, the hazards associated with a pipeline leak and existing pipeline emergency response plans. The committee utilizes information provided by the Pipeline Association for Public Awareness.

Honolulu County's LEPC includes representatives from local response agencies, emergency management, pipeline and utility operators and military facilities. **For more information, email rharter@honolulu.gov.**

SAMISH INDIAN NATION, WASHINGTON STATE

The United States Coast Guard and Washington State Department of Ecology coordinate and oversee oil spill response drills with tribal officials from the Samish Indian Nation, pipeline and refinery personnel, emergency managers and other state and local representatives.

Regular deployment drills and tabletop exercises allow hundreds of participants an intense opportunity to role-play and test the region's response coordination, capacity and planning. Due to COVID-19 conditions, hybrid drills were conducted during the last two years combining in-person and virtual participation that closely matched real-world response protocols that can involve both in-person and virtual responders.

PIPELINE EMERGENCY TRAINING

The Pipeline Association for Public Awareness offers **free training and scenarios** for fire, law enforcement and 911 center personnel online at **bit.ly/PAPA-Training.**

Lines and symbols painted on the ground near Tremont Street in downtown Denver, Colo. communicate important safety information used by construction workers to avoid damaging underground water, natural gas, electric and communication lines.

The Language of Underground Safety

COLORFUL PAINT COMMUNICATES SAFETY INFORMATION

The Smithsonian Magazine called it urban art, but for construction workers and those who manage public infrastructure, the symbols painted on the ground in bright colors are the language of safety.

Paint washes away over time. But during construction and maintenance projects, it is used to identify the location of underground pipelines and utilities, type of line, size and name of the facility operator. Markings painted on the ground follow the **Uniform Color Code** created by the **American Public Works Association (APWA)** and provide information needed to dig and work safely to avoid damage and injuries.

The Common Ground Alliance ***Best Practices: The Definitive Guide for Underground Safety & Damage Prevention*** includes reference information regarding the markings, colors and abbreviations utilized by pipeline and utility operators. Learn more at **bit.ly/CGA-BP.** Download a free **Uniform Color Code** reference guide at **bit.ly/APWA-UCC.**

APWA COLOR CODES

- PROPOSED EXCAVATION
- SURVEY MARKINGS
- ELECTRICAL
- GAS, PETROLEUM, OIL, STEAM
- COMMUNICATIONS
- POTABLE WATER
- RECLAIMED WATER
- SEWERS & DRAINS

SUBSURFACE UTILITY ENGINEERING

STATES EXPAND MAPPING DATA & SURVEY REQUIREMENTS

Subsurface Utility Engineering (SUE) is a civil engineering specialty that identifies and maps the location of underground pipelines, utility lines and other infrastructure by collecting data from facility owners and through field surveys. Information collected and validated through SUE is used to create project construction plans that include and accommodate the location of existing underground facilities.

Proponents of SUE say it helps ensure projects are finished on time, within budget and protects public safety during construction. *Best Practices:* **The Definitive Guide for Underground Safety & Damage Prevention**, published by the Common Ground Alliance (CGA), references SUE as a best practice stating: "When applied properly during the design phase, Subsurface Utility Engineering (SUE) provides significant cost and damage-avoidance benefits and the opportunity to correct inaccuracies in existing facility records." Read more at **bit.ly/CGA-BP.**

Federal Department of Transportation (DOT) highway projects require SUE in planning and design phases, and states like Pennsylvania and Colorado require SUE as part of their One Call laws.

Pennsylvania started requiring SUE in 2006. In 2017, the state modified legal requirements to specify additional timeframes and responsibilities for project owners, the state One Call Center and facility owners for "large or complex projects" costing $400,000 or more. The current law also requires Pennsylvania's One Call Center to maintain a repository of SUE data and to facilitate data sharing between project engineers and underground asset owners. Learn more about SUE requirements in Pennsylvania's *Underground Utility Line Protection Law* at **bit.ly/PENN-SUE.**

Colorado amended its One Call law in 2018 through a bipartisan bill that requires SUE surveys for specific civil engineering projects. The revised law also requires qualifying project owners to notify the state

One Call center and establishes professional licensing requirements for SUE surveys. Colorado's law also specifies data-sharing timelines for project engineers and underground asset owners. Learn more about SUE requirements in *Colorado Revised Statues, Title 9, Article 1.5 Excavation Safety* (C.R.S 9-1.5) at **bit.ly/CO-SUE**, download the *Underground Damage Prevention Safety Commission's Best Practice Guide* at **bit.ly/CO-BP-SUE** or access training at **bit.ly/CO-SUE-Training.**

Read more about SUE in the American Society of Civil Engineers' *ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data* at **bit.ly/ASCE-SUE-Standard.**

Quality Level A (QL-A) data collected through Subsurface Utility Engineering (SUE) surveys involves physically exposing underground facilities and utility lines to collect precise horizontal and vertical positional data.

SUE SURVEY DATA EXAMPLES

SUE data is collected through a variety of survey methods and is categorized by quality level (QL).

QL-A	Physical survey involving "soft-digging" (i.e. vacuum or hand-digging) to record precise horizontal and vertical positional data.
QL-B	Geophysical survey methods (i.e. electromagnetic locating instruments, radar tomography, metal detectors) to record approximate horizontal positional data.
QL-C	Surface surveys to record aboveground features (i.e. manholes, valves, hydrants)
QL-D	Utility records review and interviews with utility personnel.

BEST PRACTICE SPOTLIGHT

USE PLANNING, DESIGN & MEET TICKETS TO KEEP PROJECTS ON-TIME & SAFE

Roger Watwood

Pipeline Awareness spoke with Roger Watwood, damage prevention manager for JULIE, to learn more about planning, design, meet and locate tickets.

Q: Meet, Design, Planning, Locate Tickets – What's the difference?

A: **Meet Tickets, Design Tickets and Planning Tickets** facilitate information sharing earlier in the project planning and pre-construction process. These tickets are often not required by law; however, they can positively impact project schedules, budgets and safety.

Meet Tickets initiate a meeting request with the pipeline and utility operator with facilities near your project to determine how their facilities may impact your project. **Design Tickets**, also referred to as **Planning Tickets** in some states, initiate a request for maps or other preliminary information regarding the approximate location of underground pipelines and utility lines near your project. Refer to your state's One Call center website or contact a local representative for more information regarding Meet, Planning and Design tickets in your state.

When you request a **Locate Ticket**, the One Call center notifies pipeline and underground utility operators with facilities near your project to locate and mark their lines using temporary markings such as paint and flags. With some exemptions, state laws require municipal, county and state authorities, and their subcontractors, to request a Locate Ticket at least two or three days before starting projects that involve excavation activity.

Q: What information do engineers, planners and project managers need to provide to request One Call tickets?

A: When you contact 811 to request a ticket, it is important to provide accurate information regarding the **project location** and details regarding the **project size and scope.** Location information can be provided in GPS coordinates or length and direction of the project site from adjacent cross streets. You can also physically identify the work area using stakes, white paint or by submitting project plans.

Roger Watwood is the Southern Illinois Damage Prevention Manager for JULIE, Inc., the Illinois One-Call system. Prior to joining JULIE, he spent 15 years working for the municipal utility department in Marshall, Illinois which operates electric, gas, sewer, street, water and communication facilities. He holds an IEPA Class C Water Operator Certificate and an IEPA Class 3 Wastewater operator certificate.

STATE 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 13 states plus the District of Columbia and reference to new bills introduced in Illinois, Indiana, Iowa, Massachusetts, Nebraska and West Virginia. Download the guide at **bit.ly/811-Update-2022.**

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 Liquified 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 the petroleum industry. Under normal conditions, carbon dioxide is stable, inert and nontoxic. However, it can act as an asphyxiant.

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_2S) 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

	NATURAL GAS	PETROLEUM GAS	PETROLEUM LIQUIDS	ANHYDROUS AMMONIA	CARBON DIOXIDE	ETHANOL	HYDROGEN GAS	SOUR CRUDE OIL (H_2S)	SOUR GAS (H_2S)
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

Note (1) The majority of these products are naturally odorless and only certain pipeline systems may be odorized.
Note (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 **bit.ly/Shelter-Evacuate.**

PIPELINE RIGHT-OF-WAY

FIVE COMMON QUESTIONS

A pipeline right-of-way is the land governed by an easement agreement between a pipeline operator and a landowner or government agency. The right-of-way allows the operator to access the pipeline for maintenance, emergency response and inspections.

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.

The Pipeline Informed Planning Alliance (PIPA) provides information and resources for local officials at **pipa-info.com.**

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.

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

Pipeline rights-of-way are located in rural areas, waterways and residential areas.

Pipeline and utility companies are developing drone programs using larger drones, like this one operated by SkySkopes, fitted with LiDAR technology to inspect facilities and rights-of-way. Images captured by drone technology can be used to identify encroachments, leaks and changes in topography. Photo Credit: SkySkopes

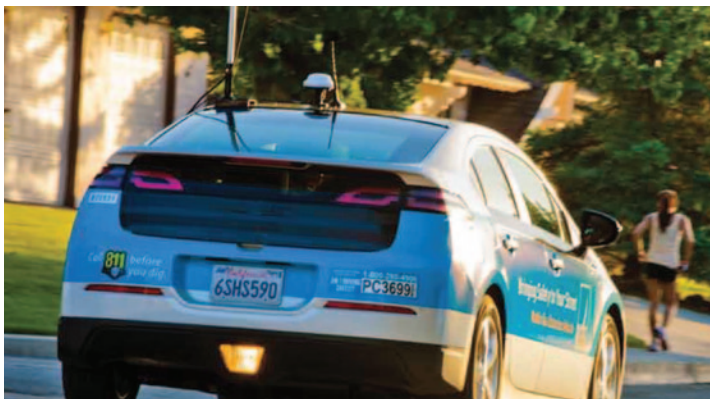
Maintaining Safe Pipelines

An underground highway comprised of more than **2.8 million miles of gathering, transmission and distribution pipelines** transports energy to homes and businesses every day.

Operators take the safety and reliability of their lines very seriously and maintain detailed integrity management plans, which include:

- Monitoring pressure and flow inside the pipeline
- Adding an odorant with a distinctive smell (normally like rotten eggs or a burnt match) to consumer-ready gas distribution systems so people are able to recognize a leak
- Injecting corrosion inhibitors to prevent corrosion from occurring inside the pipeline
- Participating in local one call notification systems and promoting 811 and "Call Before You Dig" messaging to ensure safe digging
- Making sure that all pipelines are properly marked prior to excavation activities
- Inspecting the interior of the pipeline using current technology at regular intervals
- Maintaining a clear right-of-way around the pipeline to accommodate periodic inspections (either by foot or by airplane) to identify any signs of a leak, obstruction or encroachment
- Providing training to pipeline employees to meet qualification standards
- Training emergency responders to recognize a potential release and know how to properly respond

You can contact PAPA members to learn more about pipeline integrity management plans through our member directory at **bit.ly/PAPA-Members.**



Pacific Gas and Electric Company (PG&E) conducts ongoing gas system leak detection surveys using ultra-sensitive methane detection equipment attached to cars. Photo Credit: PG&E

Regulatory Updates

WILL NEW REQUIREMENTS IMPACT YOUR COMMUNITY?

Federal regulatory requirements set the minimum standards for pipeline construction, maintenance and permitting. New requirements published in the last year aim to expand integrity management activities to a broader set of pipelines and improve emergency response capabilities.

GATHERING PIPELINE REQUIREMENTS

Under the rules finalized in November 2021 by the Pipeline and Hazardous Material Safety Administration (PHMSA), gathering pipelines greater than 8 inches in diameter will be required to comply with existing data reporting and Integrity Management (IM) requirements including standards for pipeline design, inspections and pipeline markers. Pipeline operators of lines that meet the new criteria are also required under the new rules to have emergency response plans, public awareness programs and to include lines in "call before you dig programs." The new requirements are expected to cover about 100,000 miles of currently unregulated gathering pipe and will go into effect over the next year.

PIPELINES IN UNUSUALLY SENSITIVE AREAS (USA)

PHMSA recently updated pipeline safety regulations to explicitly state that certain coastal waters, the Great Lakes, and coastal beaches are classified as unusually sensitive areas (USA) for the purpose of compliance with the hazardous liquid integrity management (IM) regulations specific to High Consequence Areas (HCA). The updated definition of USA was mandated by the **Protecting our Infrastructure of Pipelines and Enhancing Safety Act (PIPES) of 2016** and the **PIPES Act of 2020.**

Under the new definition, a hazardous liquid pipeline that could affect these newly designated areas must be included in an operator's IM program. Based on a geospatial analysis using data in the National Pipeline Mapping System (NPMS), PHMSA estimates that 2,905 additional miles of hazardous liquid pipelines, primarily in states adjoining the Gulf of Mexico, will be required to follow liquid IM requirements due to this change.

EMERGENCY SHUT-DOWN VALVE REQUIREMENTS

PHMSA recently published new regulatory requirements that require automatic shut-off values on new or

replaced onshore pipelines that are six inches in diameter or greater and transport natural gas, carbon dioxide and hazardous liquids.

The new rule also requires pipeline operators to comply with specific performance standards for operating automatic shut-down values during an emergency to isolate a ruptured pipeline segment as soon as practicable (but no more than 30 minutes) after a pipeline emergency is identified.

The final rule also requires operators to include written procedures for timely identification and response in their emergency response plans as well as procedures for engaging public safety officials such as 9-1-1 call centers, fire, police and other first responders.

"We must continue to work towards zero incidents and zero releases from pipelines," said PHMSA Deputy Administrator Tristan Brown. "More than a decade in the making, this new rule requires the installation of modern technology to mitigate the impacts of pipeline failures on people, first responders, and our environment."

Local officials are encouraged to contact pipeline operators or their PHMSA Community Liaison for more information regarding how the new requirements for emergency shut-down valves apply to pipelines in their jurisdiction.

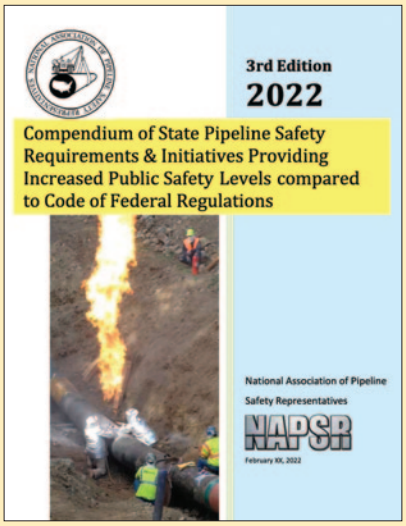
LEARN MORE

Local officials are encouraged to contact pipeline operators or their PHMSA Community Liaison for more information on these new requirements. You can reach PAPA members through our Member Directory available at **bit.ly/PAPA-Members.** Contact information for PHMSA Community Liaison reps is available at **bit.ly/PHMSA-CATS.**

ADVANCING PUBLIC SAFETY

REPORT HIGHLIGHTS STATE PIPELINE SAFETY BEST PRACTICES

A new report released by the National Association of State Pipeline Safety Representatives (NAPSR) serves as a detailed resource for state and local public officials who are interested in examining pipeline safety best practices in other states.



"Pipeline safety does not lend itself to a one-size-fits-all approach," says former NAPSR Chair Randy Knepper, who most recently served as director of safety for the New Hampshire Department of Energy. Most states can and do adopt pipeline safety regulations that are more stringent to satisfy local public safety needs," he adds.

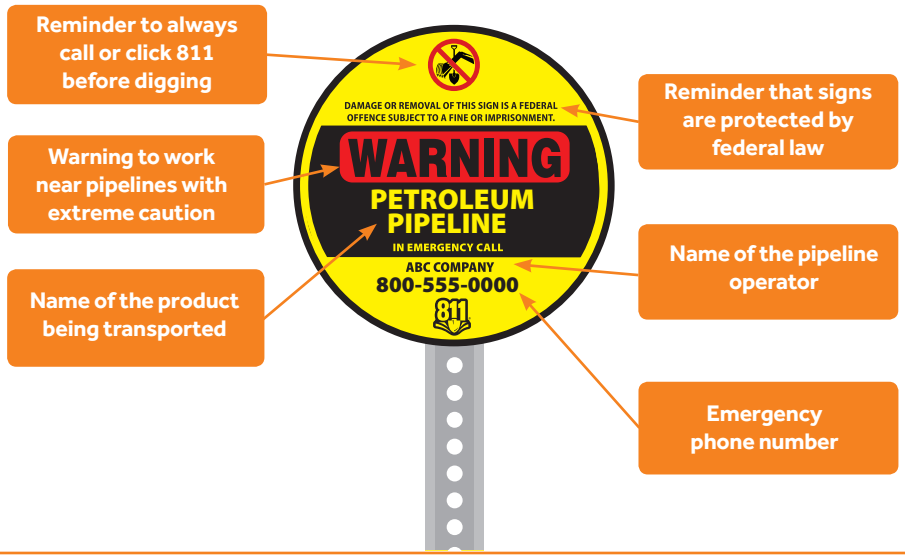
According to the report, 45 states have implemented at least one initiative above and beyond the minimum requirements of the Code of Federal Regulations (CFR) that apply to pipeline operators in their state.

The report includes discussion of over 1,400 specific initiatives in 23 categories including enhanced reporting, recordkeeping, cathodic protection and design and installation requirements.

Read and download NAPSR's Compendium of State Pipeline Safety Requirements & Initiatives online at **bit.ly/NAPSR-Compendium.**

WHAT'S ON A PIPELINE MARKER?

Pipeline markers identify the general location of underground pipelines and utility lines and provide critical safety information to the public.



AT-A-GLANCE

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 **bit.ly/PHMSA-NPMS** or Pipelines Nearby **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** or **call811.com.**

Download an electronic version to share at bit.ly/Pipeline-Info-2022

Contact the Association or use the membership directory bit.ly/PAPA-Members to contact a pipeline operator representative to discuss upcoming projects near pipelines in your community or for more information about operator-specific pipelines, compressor stations or storage facilities. The federal government also provides access to state-specific and operator-specific pipeline safety information online at bit.ly/PHMSA-Data

Información en Español disponible en bit.ly/Info-Tuberias-Seguridad

THINGS TO KNOW ABOUT PIPELINE MARKERS

1. Although pipeline markers vary in size, shape and color, all markers include the name of the operator, the product in the pipeline or type of utility line and an emergency phone number.
2. Pipeline markers do not identify the exact location, depth or number of pipelines in the area, and pipelines do not always run in a straight line between markers.
3. Always call or click 811 before digging to have the location of underground lines marked with temporary markings including stakes, whiskers, flags or paint.
4. Pipeline markers are located along transmission pipelines. They may not be located continuously along gathering or distribution lines. Pipeline markers are not typically used to identify the location of gas distribution service lines connected to homes and businesses.
5. Pipeline markers are protected by federal law. Intentionally damaging or removing a pipeline marker can result in a fine. Report missing or damaged pipeline markers to the pipeline operator using the number on a nearby marker so they can be replaced.

REQUEST INFO

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.

STATE:	COUNTY:
FIRST NAME:	LAST NAME:
CONTACT EMAIL:	
CONTACT PHONE:	
ORGANIZATION NAME:	
REQUEST:	

FEEDBACK

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 PUBLIC AWARENESS NEWSLETTER ARE:

SUBMIT THIS FORM:

Pipeline Association *for* Public Awareness

1. ONLINE

pipelineawareness.org/request-info

SCAN ME

2. EMAIL

After completing this form, scan or snap a pic and email to **admin@pipelineawareness.info.**

3. MAIL

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

TRIBAL NATION DEVELOPS UNIQUE APPROACH TO PIPELINE SAFETY

Because of their proximity to the Bakken oil field, the **Three Affiliated Tribes** (TAT) in North Dakota view pipelines as part of a balanced approach to transporting energy that can reduce the number of trucks on their roads.

The TAT developed their Oil and Gas Pipeline Safety Code in alignment with Article III of their constitution and created the **TAT Pipeline Authority** to enforce safe development and operation of pipelines on the Fort Berthold Indian Reservation. The TAT Pipeline Authority enforces code requirements, supports emergency response activities, conducts Hazardous Materials (HAZMAT) training and works with other state and federal agencies.

By developing more stringent, yet feasible standards, the TAT Pipeline Authority says it has significantly reduced both the volume and number of pipeline releases. Learn more about the TAT Pipeline Authority and TAT's pipeline safety code at **bit.ly/TAT-Pipeline-Authority.**

GRANTS FOR MUNICIPAL GAS SYSTEMS

A new grant program administered by the Pipeline and Hazardous Material Safety Administration (PHMSA) offers nearly $200 million in grants annually over the next five years to municipal or community-owned utilities to help repair, rehabilitate or replace natural gas distribution infrastructure.

The grants are funded through the Bipartisan Infrastructure Law signed by President Biden on November 15, 2021. Learn more at **bit.ly/NG-Modernization-Grants or at Grants.gov.**

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 **bit.ly/CGA-BP.**

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 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 tickets, design tickets 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.