



# Pipeline Safety Information for Schools

## Application of this information can help:

- Determine the presence of nearby pipelines
- Aide in the recognition and response of a pipeline leak
- Provide advance planning guidance
- Help reduce damage risks posed to pipelines that could lead to a school pipeline emergency

To download this brochure and access additional information visit:

[www.schoolpipelinesafety.org](http://www.schoolpipelinesafety.org)



## for Schools

School Officials today are more diligent and proactive than ever at assessing potential risks, threats and hazards that may be in or around their schools, athletic fields and bus routes. But one danger is often overlooked and left out of

emergency assessments and plans and that may be because it is out of sight.

Pipelines are a vital transportation method of energy products including natural gas, petroleum liquids, petroleum gas, and other chemical and/or hazardous materials that support the American economy and our consumption needs.

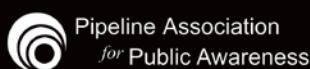
Although pipelines are considered the most safe and reliable mode of transporting energy products, pipeline emergencies can occur due to improper or unauthorized digging near a pipeline, mechanical failure, human error, corrosion or terrorism. The greatest concern during a pipeline emergency is the release of hazardous materials as well as the potential for fire and explosions that could result in injury, fatality, environmental harm or other loss. That is why the American Petroleum Institute says that places of congregation, such as schools, that are located near pipelines are “high consequence areas”.

A pipeline emergency in close proximity to a school can necessitate either sheltering in place or evacuation of students and staff from the site.



School Pipeline  
Safety Partnership

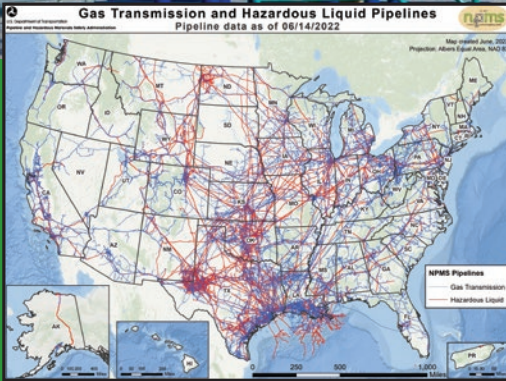
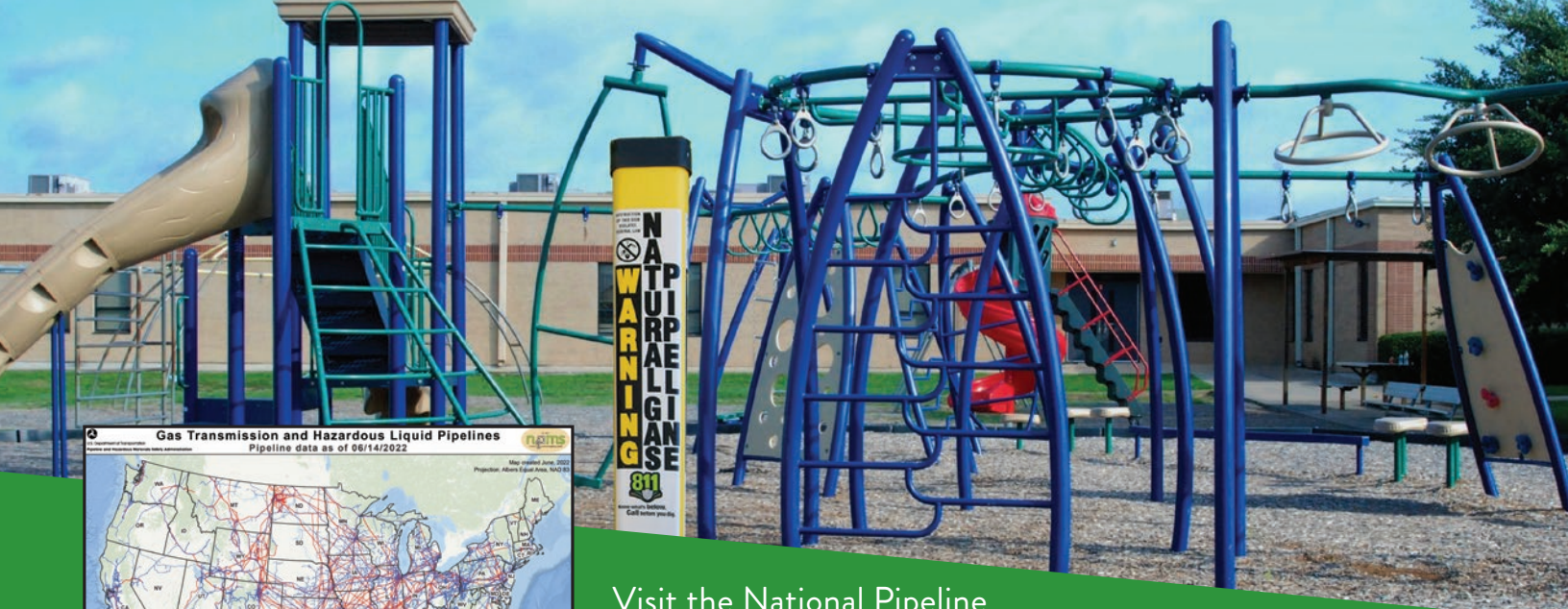
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Visit the National Pipeline Mapping System's "General Public" portal at [www.npms.phmsa.dot.gov](http://www.npms.phmsa.dot.gov) to find:

- A list of transmission pipeline operators in your county
- A map of nearby transmission pipelines

# Identifying Pipeline Locations

Pipelines are located in an easement or right-of-way (ROW). ROW's can be located by looking for strips of land that are clear of vegetation, houses, buildings and other structures. You can also spot a ROW by looking for the presence of pipeline markers.

Pipeline markers vary in shape, color and size. The information on these vertical posts can appear on square, round or slanted signs or be applied directly onto (or wrapped around) the post.

Pipeline markers are meant only as a general guide and warning that a pipeline is nearby and should not be used to determine the exact location of an underground facility.

Pipeline markers contain information useful for general awareness, as well as emergency planning including:

- The words "Warning", "Caution" or "Danger"
- Pipeline operator name
- Pipeline operator emergency number
- Product being transported

Pipeline markers DO NOT tell you:

- The exact location of the pipeline
- Pipeline depth
- Pipeline size
- Number of pipelines represented



The majority of pipelines are buried underground and remain out of sight. However, pipelines can be seen emerging from the earth at terminals, pumping and compressor stations, or be seen crossing some waterways or bridges.





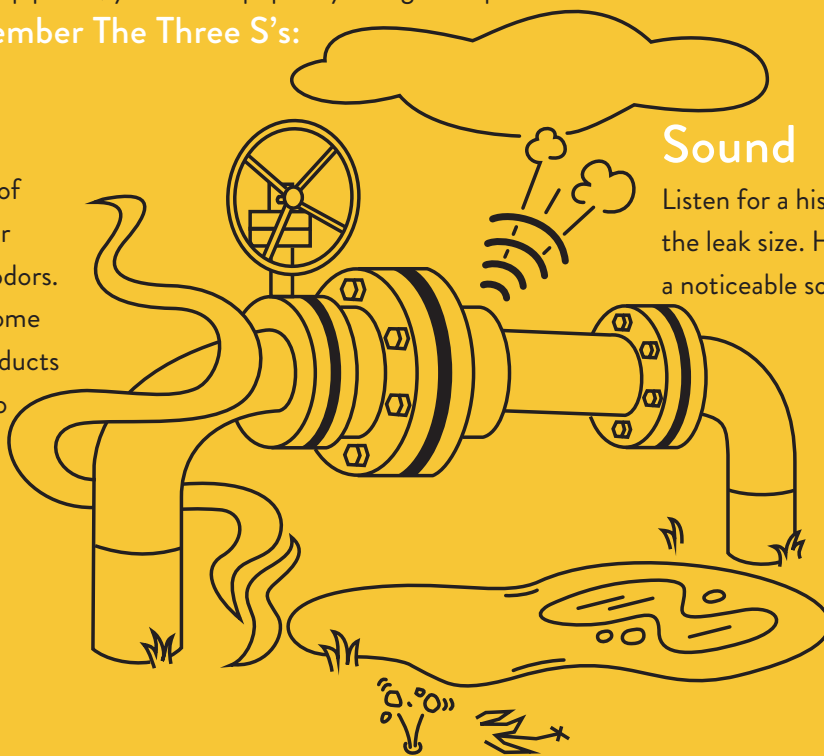
# Recognizing Pipeline Leaks

Although pipeline incidents are rare, when they happen it can create an emergency that few are prepared for. When near a pipeline, you can help quickly recognize a potential leak or unintended release of product.

Just remember **The Three S's**:

## Smell

Be mindful of sulfur-like or petroleum odors. However, some pipeline products may have no odor at all.



## Sound

Listen for a hissing or a roaring sound. The loudness depends on the leak size. However, a slow liquid product leak may not make a noticeable sound.

## Sight

Watch for dead or discolored vegetation along a pipeline easement. Also, look for unusual pools or puddles of liquids or clouds of vapor or mist. Blowing dirt on the ground or continuous bubbles in standing water are also danger signs.

A pipeline emergency will likely require a significant response by local authorities and pipeline companies. School Officials should work in a collaborative effort with those authorities to determine incident specific directives.

## Do

- Take immediate action to ensure you are in a safe location, including being uphill and upwind of the leak if possible
- Unless following sheltering-in-place protocol, leave all equipment and machinery "as is"
- From a safe location, call 911 and then the pipeline operators emergency number
- Secure the area and warn others

## Don't

- Drive/walk into a vapor cloud or towards the pipeline
- Introduce an ignition source such as a match/lighter, vehicle engine or anything that could create heat or a spark
- Use a telephone until in a safe location
- Come in physical contact with any escaping material



# Preparing Your School

Knowledge and advance preparation are essential to a successful emergency response effort. The following suggestions can aide you in developing a pipeline emergency plan.



**Conduct** emergency scenarios, drills or tabletop exercises simulating a pipeline incident given the unique situation of your school, nearby pipelines, bus routes, access roads and other critical features and dynamics as you do with other types of emergencies.

**Include** this brochure and other downloads available at [www.schoolpipelinesafety.org](http://www.schoolpipelinesafety.org) in your Emergency Operations Plan binder. Be sure to search the website for your school name to determine if a local pipeline company has sponsored your school to provide customized resources.

**Use** the information you have gathered in advance to collaborate with others including representatives from the appropriate pipeline companies, local first responder agencies and your colleagues or safety teams.

**Identify** nearby pipelines using online mapping tools as well as observing the presence of pipeline markers and collect the following information:

- The pipeline company name(s)
- The pipeline emergency (and non-emergency) numbers
- The product that is being transported in the pipeline(s) and hazards associated with the product(s)
- Indications of a pipeline leak – depending on what type of product is being transported (what the product leak would look, sound and smell like)
- The approximate location of the pipeline (include map if possible)
- The recommended evacuation distance based on the impact radius of the pipeline





Know what's below.  
811 before you dig.

## Has 811 Been Notified?

A good indication that 811 has been notified is the presence of temporary markings such as colored paint and/or flags in the area the work is being performed. Below is a Uniform Color Code Chart that lists what each color represents.

Go to [www.call811.com](http://www.call811.com) and select your state to learn more.

# Preventing a Pipeline Emergency

## Industry Safeguards

To ensure the safe construction and operation of pipelines on behalf of public and environmental safety, the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) along with state government agencies, set and enforce strict regulations.

Pipeline operators use a combination of measures to protect the nation's energy infrastructure including the use of control centers which monitor their pipeline systems 24 hours a day, 365 days a year. Additionally, operators routinely inspect their pipelines using a variety of methods from in-person examinations and aerial patrols to the use of high-tech internal inspection devices. Cathodic protection is also used to prevent corrosion.

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

Teach kids a safety message that will last



a lifetime. Multi-media materials are free for educators, troops, 4-H leaders or parents to download and use in teaching children about 811.

<http://call811.com/get-involved/811-kids>

## Know what's below... call or click 811 before you dig

Digging on or near school grounds can pose a risk to underground pipelines and utilities. Calling or clicking "811" to have underground infrastructure marked prior to digging is free and can help prevent an unnecessary school emergency.

Be vigilant of any nearby construction or excavation work and ensure that the person doing the digging has had underground pipelines and utilities marked on behalf of student and community safety.



# Pipeline Safety Information for Bus Drivers

## Did you know?

- Over 2.3 million miles of pipelines crisscross the United States transporting gas and hazardous liquids.
- Annually, nearly 500,000 school buses travel over 4.3 billion miles, serving over 26 million school-age children.
- The average school bus transports 54 student passengers.
- Many of the miles school bus drivers travel are on roads running parallel or intersecting with pipelines.



Since school buses travel over and in close proximity to high-pressure pipelines every day, it is vital that pupil transportation personnel be aware of pipeline safety essentials including:

How to identify pipeline locations along bus routes in the communities they serve.

How to detect a pipeline leak using smell, sight and sound.

How to properly respond to a pipeline leak along a bus route or school pipeline emergency evacuation.

How to be vigilant of risks posed to pipelines along bus routes and report or intervene on behalf of student and community safety.

Many of these topics are contained in previous sections of this brochure. For additional free pipeline safety education for Pupil Transportation Directors and Bus Drivers, including a brief eLearning unit, visit [www.schoolpipelinesafety.org/transportation-directors](http://www.schoolpipelinesafety.org/transportation-directors)