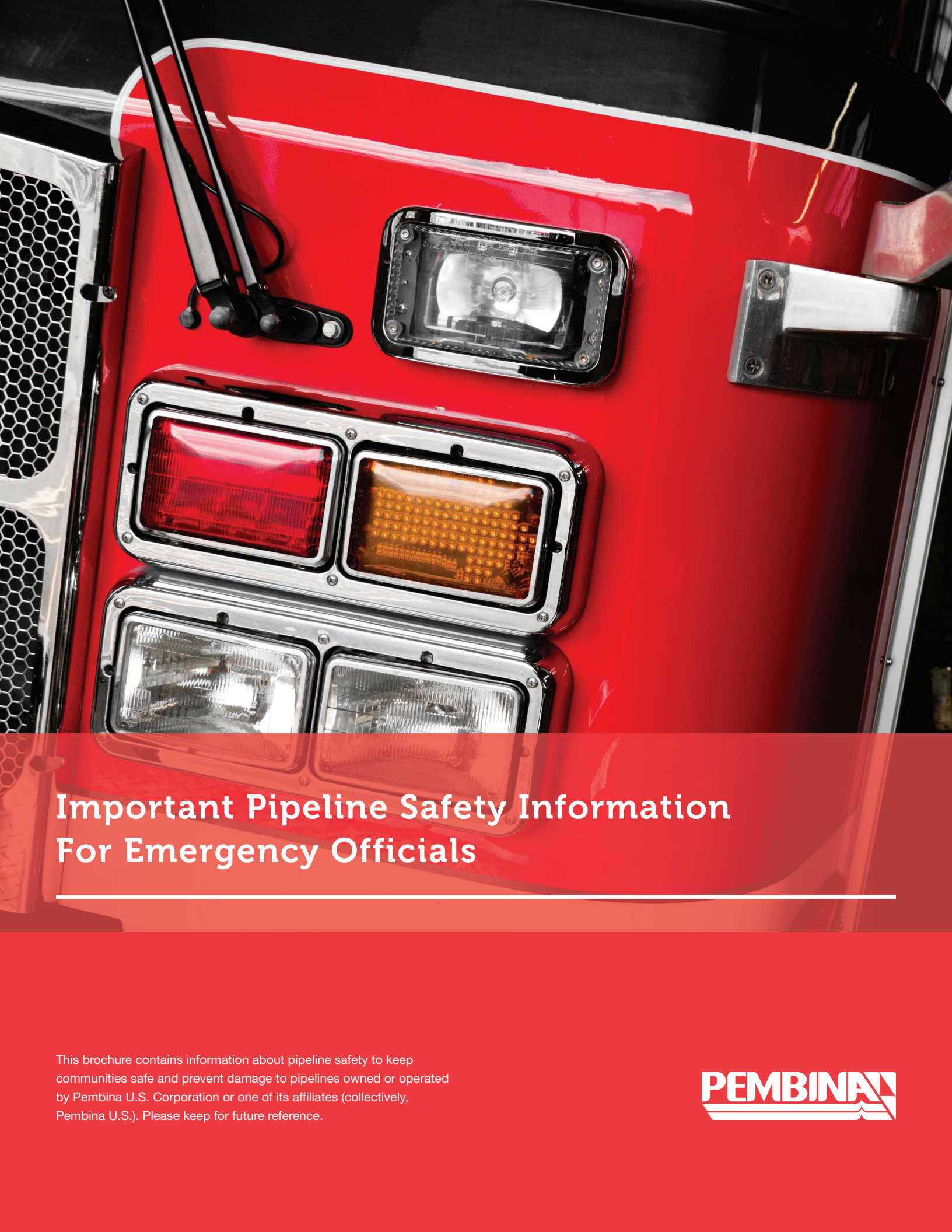




Important Pipeline Safety Information For Emergency Officials

This brochure contains information about pipeline safety to keep communities safe and prevent damage to pipelines owned or operated by Pembina U.S. Corporation or one of its affiliates (collectively, Pembina U.S.). Please keep for future reference.



Working together

Our partnership in safety with emergency responders ensures we are prepared to minimize the threat to the public and damage to the environment in the unlikely event of an emergency. We value the expertise you possess as emergency responders and are committed to strengthening our partnership through educational opportunities about our pipelines.

Read on to find out how to identify where pipelines are located in your community, how to recognize a potential pipeline release and know what to do in a pipeline emergency.

About Pembina

Pembina Pipeline Corporation (Pembina) is a leading energy transportation and midstream service provider that has served North America's energy industry for more than 70 years. Pembina owns an extensive network of strategically located assets, including hydrocarbon liquids and natural gas pipelines, gas gathering and processing facilities, oil and natural gas liquids infrastructure and logistics services, and an export terminals business. Through our integrated value chain, we seek to provide safe and reliable energy solutions that connect producers and consumers across the world, support a more sustainable future and benefit our customers, investors, employees and communities.

Pipelines are a safe and efficient means of transporting large quantities of crude oil, natural gas and natural gas liquids. Pembina U.S. pipelines and facilities are designed, constructed, and operated in a safe and environmentally responsible manner.

U.S. pipeline systems

In 2019, Pembina U.S. acquired ownership of the U.S. portion of the Cochin Pipeline System, which transports condensate, from Kinder Morgan. The U.S. portion of the Cochin Pipeline System is owned and operated by Pembina Cochin LLC, an affiliate of Pembina U.S. Corporation.

The U.S. portion of the Vantage Pipeline and the West Spur Lateral pipelines are high vapor pressure (HVP) pipes that transport ethane. Vantage Pipeline US LP (Vantage) is the owner and operator of the

Vantage Pipeline and the West Spur Lateral. Vantage is an affiliate of Pembina U.S. Corporation.

Pembina U.S. is an indirect partial owner of Aux Sable, in partnership with Williams. Aux Sable is physically operated by a Pembina U.S. subsidiary, and includes the Channahon Pipeline, which is a HVP propane / butane pipeline, and the Prairie Rose Pipeline, which is a HVP natural gas pipeline.

The Alliance Pipeline system consists of a 2,391-mile integrated Canadian and U.S. natural gas transmission pipeline system, delivering rich natural gas from the Western Canadian Sedimentary Basin and the Williston Basin to the Chicago market hub. The system has been in commercial service since December 2000 and, through an innovative suite of customer-focused services, delivers an average of 1.6 billion standard cubic feet (or 45.3 million standard cubic meters) of natural gas per day.

What is condensate?

Condensate is a low-density mixture of hydrocarbon liquids. It is typically used as a diluent in heavy oil production. Because condensate is typically liquid in ambient conditions and also has very low viscosity, it is often used to dilute highly viscous heavier oils that cannot otherwise be efficiently transported via pipelines.

What is ethane?

Ethane is a hydrocarbon that is isolated from natural gas. The petrochemical industry uses raw materials such as benzene, ethane, and propane from the oil and gas industry to manufacture products that we use every day. The Vantage Pipeline and the West Spur Lateral transport ethane, which is most commonly used to produce ethylene and polyethylene. These chemicals are needed to manufacture products like plastic, automotive antifreeze, and detergent.

What is fuel gas?

Fuel gas is a component of natural gas and is composed primarily of methane. Fuel gas is used to power natural gas engines and generators, and in various industrial applications.

What is propane/butane?

Propane and butane are hydrocarbons isolated from natural gas. The petrochemical industry uses raw materials such as propane and butane to manufacture products that we use every day. Propane and butane are used for cooking and heating. Butane is also used as a refrigerant and as propellant in aerosol cans.



Emergency & Continuity Management Program (ECMP)

Pembina U.S. is committed to being ready to safely and effectively respond to emergency situations related to or impacting our operations. Our Emergency Response Plans (ERP) are the framework we use to plan and prepare to respond, while complying with applicable regulations. This includes:

- corporate and area-specific emergency management plans with a complete set of standards and processes to support the safety of the public, our workers and the environment
- predetermined strategies and tactics for incident response
- responder training, including annual exercises and ongoing incident response training opportunities
- specialized response equipment strategically placed within our operating areas

Our preparation and training provide the foundation for our approach to a safe and effective response.

The Emergency Official's role

In the unlikely event of an emergency, Pembina U.S. may request support from emergency officials to assist with:

- providing medical aid, or other lifesaving services, if necessary
- providing support with roadblocks, site security or crowd control, if necessary
- public notifications and evacuations, if necessary and safe to do so
- fire suppression for areas outside company property, if safe to do so

What should First Responders do in the event of an industry related emergency?

1. Stay upwind
2. Block off access to the incident site
3. Call Pembina U.S. emergency numbers and report the nature and location of the incident
 - Pembina U.S. 24-hour emergency number: **1-800-360-4706**
 - Emergency number for Aux Sable, North Dakota: **701-628-9393**
 - Emergency number for Aux Sable, Illinois: **815-941-5858**
 - Emergency number for Alliance (US & Canada): **1-800-884-8811**
4. Remove all sources of ignition
5. Do not drive into a vapor cloud
6. Do not approach a leak or suspected leak

7. Do not extinguish a leaking gas flame
8. Do not operate pipeline valves
9. Wait for Pembina U.S. to isolate the pipeline

What will Pembina U.S. do in the event of an Emergency?

- locate the release/site
- isolate the area
- shut in the source, if possible
- depressure pipeline
- activate the Incident Command System
- notify:
 - First Responders
 - regulatory agencies
- conduct containment and recovery actions
- preserve the area for incident investigation
- prepare for clean-up and repairs

What you shouldn't do

- do not touch or go near any liquid, gas or vapor cloud
- do not start your vehicle or any equipment that could be a potential ignition source
- do not smoke or light a match, and avoid heating sources or making sparks
- do not turn on or off anything that may create a spark, including cell phones, pagers, flashlights, keyless entry remotes, vehicle alarms, and light switches, until you are in a safe location
- do not attempt to operate or turn pipeline valves

If there is a fire at a facility, unless lives are at risk:

- fire crews are to stay outside of the facility boundary.
- do not extinguish crude oil fires with water
- facility should not be entered unless immediate risk to public safety

Emergency & Continuity Management Program (ECMP)

Plans

Pembina U.S. Emergency Response Plans (ERP) have been developed to provide strategic plans and processes that protect public safety and minimize, or eliminate, impacts to the public in accordance with regulatory requirements.

An emergency response led by Pembina U.S. is guided by geographic area and/or operating system specific ERPs Plans which include:

- Incident Command System (ICS) roles and responsibilities
- Contact information for key Pembina U.S. employees and support resources
- Methods to notify affected stakeholders, local authorities, government agencies, and First Responders
- Identification of emergency response materials and equipment locations
- Implementation of public protection measures such as environmental monitoring, isolation, sheltering, evacuation, installation of specialized equipment to isolate and minimize environmental impacts
- Detailed mapping and/or diagrams
- References to additional supporting documentation relevant to the response.

Pembina U.S. ERP Plans are reviewed and evaluated for effectiveness and updated on a regular basis.

Responder Training

Pembina U.S. ensures that first responders are adequately trained to respond to a release. Training sessions are held throughout our operating areas focusing on response issues specific to the location.

These training sessions include:

- tabletop exercises to review procedures
- functional and full-scale exercises to practice skills
- equipment deployments to test our resources

Equipment

Pembina U.S. invests in specialized response equipment and associated personnel training. Our equipment is strategically placed within our operating areas to ensure a rapid and effective response. Pembina U.S. has created a tiered response to organize our equipment and ensure an efficient response to an incident. This structure ensures first responders have access to the required equipment as they need it.

Public Protection Measures

Shelter-in-place or “sheltering” is the practice of remaining safely indoors during an outdoor release of a hazardous product. This will help to create a safe environment during an incident. In an incident, sheltering has been determined to be the best initial public protection measure.

Sheltering may be used to protect the public from a product release in circumstances when:

- there is insufficient time or warning to safely evacuate the public that may be at risk
- members of the public are waiting for evacuation assistance
- the release will be of limited size and/or duration
- the location of a release has not been identified
- the public would be at higher risk if evacuated

Evacuation procedures may be initiated once it is safe to do so. Appropriate environmental monitoring equipment may be used to assist with facilitating a safe evacuation. Transportation will be provided, if required.

Ignition procedures may be implemented if deemed as an appropriate public safety measure.



Spill Exercise

Product characteristics

Pembina U.S. pipelines carry different product, and warning signs differ depending on the type of resource transported.

Products have different characteristics if they are released:

Ethane enters the atmosphere as a hazardous and flammable gas. Contact with ethane may cause skin irritation and/or frostbite. Exposure to ethane may cause headache, dizziness or nausea. Ethane is heavier than air. At very high concentrations, ethane can cause suffocation due to the lack of oxygen in the air.

Condensate is a hazardous and extremely flammable liquid. Contact with condensate may cause headache, nausea, dizziness, skin and eye irritation.

Fuel gas is extremely flammable and may cause suffocation. If you feel unwell, seek medical attention immediately. Contact with rapidly expanding or liquified gas may cause skin irritation and/or frostbite

Propane is an extremely flammable product. Propane vapors may travel long distances to a point of ignition and then flash back. Exposure to skin may cause frostbite, blisters, tingling, pain and/or numbness. Propane is an extremely flammable product that is heavier than air.

How to spot a pipeline release

Know the warning signs

Although rare, it is important to know the warning signs of a pipeline release:

You might see:

- dead or dying vegetation in an otherwise green area
- dirt being blown or appearing to be thrown into the air
- a white vapor stream or mist-like cloud over the pipeline
- unexpected frost or ice on the ground
- discolored snow or vegetation
- a moist patch or pool of clear, light brown or yellow liquid

You might hear:

- an unusual hissing, blowing, or roaring noise

You might smell:

- a petroleum or hydrocarbon smell similar to gasoline or diesel fuel

Safety is a shared responsibility

Pembina U.S. takes many steps to ensure safe and reliable operations which include a strict adherence to an Integrity Management Program and continuous monitoring and maintenance. Damage from third-party excavation and construction activities around pipelines is the most common cause of damage to pipelines. That's why safety is a shared responsibility and members of the digging community and the public have a responsibility to help protect pipelines from damage.

How you can help

Reporting a pipeline-related incident to our emergency phone number can help us initiate a faster response.

- **24-hour emergency line: 1-800-360-4706.**
- **Emergency number for Aux Sable Prairie Rose, North Dakota: 701-628-7591**
- **Emergency number for Aux Sable Channahon, Illinois: 815-941-5858**
- **Emergency number for Alliance (US & Canada): 1-800-884-8811**

To report suspicious activity, please contact your local law enforcement. Describe specifically what you observed, including:

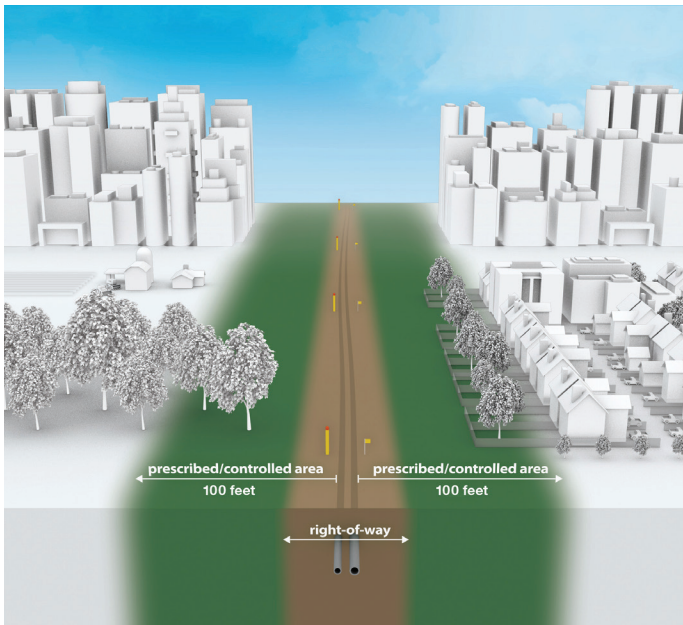
- who or what you saw
- when you saw it
- where it occurred
- why it's suspicious



Locating pipelines in your community

A pipeline Right of Way (ROW) is the strip of land where the pipeline is located. The width of the ROW may vary depending on factors such as pipeline diameter and the slope of the land, but the width will typically range from 40 to 100 feet for the entire length of the pipeline. The ROW enables Pembina U.S. employees and contractors to access the pipeline for inspections, maintenance, testing, and in the rare event of an emergency.

ROW corridors are often recognizable because they are clear of trees,



buildings and other structures. The corridor enables Pembina U.S. employees and contractors to access the pipeline for operations, inspections, maintenance, testing, and in the rare event of an emergency.

Regulations restrict certain activities near the pipeline or ROW that could pose a threat to public safety and the safe operation of the pipeline.

These activities may need written consent from Pembina U.S.



Pipeline markers

Pipeline markers are located along the pipeline ROW. Note that more than one pipeline can share a right-of-way. Markers identify the area, but not the exact location or depth of the pipeline. They also specify the product transported, the operator's name and emergency contact number. ONLY a Pembina U.S. representative can identify the exact location of the pipeline.

Here are some examples of what our signage looks like.



How to obtain more information about pipelines and pipeline operators where you work or live.

The National Pipeline Mapping System (NPMS) is an on-line mapping tool available to the public that enables you to view information on transmission pipelines that are under Department of Transportation (DOT) and Pipeline and Hazardous Materials Safety Administration (PHMSA) jurisdiction. By accessing the NPMS, you can view information on a county by county basis and obtain information on which transmission pipelines operate in your community. You can also obtain contact information for pipeline operators in your area. The NPMS can be accessed here: <https://www.npms.phmsa.dot.gov/>

Remember: The NPMS is not to be used to identify exact locations of pipelines.

Digging around pipelines

Some of the biggest threats to pipelines come from unauthorized construction, development, encroachment and digging activities. To protect people and the environment, and to reduce the risk of pipeline damage, state and federal laws require anyone planning ground disturbance to call their local One Call Notification Center or call **8-1-1** in advance of the activity.

Pembina U.S. works with members of the public and the digging community to ensure safe protocols are followed when work is conducted near pipelines. We inform stakeholders about:

- where pipelines are located.
- the importance of contacting the local One Call Notification Center at least 2-3 business days before conducting any ground disturbance activities.
- waiting until the lines are marked before digging.
- following the instructions of an authorized pipeline operator representative.
- Call Pembina U.S. emergency numbers and report the nature and location of the incident
 - Pembina U.S. 24-hour emergency number: **1-800-360-4706**
 - Aux Sable Prairie Rose (North Dakota): **701-628-7591**
 - Aux Sable Channahon (Illinois): **815-941-5858**
 - Alliance (US & Canada): **1-800-884-8811**

Potential hazards to pipelines

These activities, among others, can pose a risk to pipelines:

- landscaping
- planting a tree
- installing fence posts or building a fence
- fixing or improving an existing ditch, drain tile, or fence
- building a berm
- constructing roads, paving, parking, driveways, ditches, railways, overhead or underground utilities
- altering the grade
- deep tilling or ripping
- installing drain tile
- operating non-agricultural equipment or other vehicles on or over the Pipeline or Right-of-Way (such as ATVs and snowmobiles).



Pipeline reliability

Pembina U.S. is focused on pipeline safety and maintaining the integrity of our pipelines.

We know that maintaining the integrity of our pipelines is essential to the health and safety of the communities where we operate. That's why we've developed, and are continuously improving, processes and programs to monitor our pipelines.

Pembina U.S. ensures our pipelines and facilities are designed, constructed, and operated in a safe and environmentally responsible manner. We develop stringent standards and review potential hazards, in addition to conducting regular safety meetings, contractor screenings, and inspections.

Pembina U.S. conducts regular inspections, maintenance, and testing to confirm that pipelines are operating safely. Pipelines are monitored 24/7/365 from a control room using sensors that monitor flow and operating conditions. We also use in-line tools and aerial inspections to monitor pipelines.

Importance of Depth of Cover

Depth of cover (DOC) is the vertical distance between the top of the pipeline and the surface of the ground. It is crucial for protecting both the pipeline and the interests of landowners. Adequate depth ensures the pipeline is shielded from surface activities like agricultural activity, construction, or heavy equipment traffic, reducing the risk of accidental damage and potential safety hazards.

If you are aware of areas where DOC has changed due to erosion, construction activities, or farming practices, please contact us at DPPA@pembina.com or 1-800-920-1979.



➤ 24-hour emergency line: **1-800-360-4706**

Aux Sable Prairie Rose (North Dakota): **701-628-7591**

Aux Sable Channahon (Illinois): **815-941-5858**

Alliance (US & Canada): **1-800-884-8811**

If you notice any unusual or suspicious activity on or near the pipeline or Right-of-way (ROW), please report it by calling 911 **AND** Pembina U.S. 24-hour emergency number above.

Call before you dig

Some of the biggest threats to pipeline safety come from damage from unauthorized construction, development, encroachment and digging activities. Notifying Pembina U.S. and the local One-Call Notification Centre are the first steps to preventing damage to underground infrastructure and working safely around pipelines.



How to contact us

Pembina strives to be a trusted member of the community. We're committed to open, two-way communication with our stakeholders. We welcome the opportunity to make a connection with you — please contact us in any of the following ways.



www.pembina.com/safety/dppa/us

Community Relations:

Phone Toll Free: **1-888-920-1979** (Non-emergency calls only)

Email: community@pembina.com

Pembina's head office:

Pembina Pipeline Corporation

4000, 585 - 8 Avenue S.W.

Calgary, Alberta, Canada T2P 1G1

Phone: **403-231-7500**

Toll Free: **1-888-428-3222**