

NORTHERN CALIFORNIA



PIPELINE SAFETY TRAINING



PROGRAM GUIDE

Overview

Pipeline Safety

Excavation Best Practices Checklist

Signs Of A Pipeline Release

What To Do If A Leak Occurs

Pipeline Emergency

Common Ground Alliance Best Practices

Pipelines In Our Community

Damage Prevention Programs

Pipeline Damage Reporting Law

2023

EMERGENCY CONTACT LIST

<u>COMPANY</u>	<u>EMERGENCY NUMBER</u>
Air Products, LLC	1-800-572-6521
California Natural Resources Group (CalNRG)	1-888-664-4435
California Resources Corporation - Central Valley	1-661-763-6363
or	1-661-763-6911
California Resources Corporation - Elk Hills, LLC	1-661-763-6363
or	1-661-763-6911
Chevron Pipeline & Power.....	1-800-762-3404
Crimson Pipeline, LLC.....	1-866-351-7473
DCOR, LLC	1-888-225-1522
ExxonMobil Pipeline Company.....	1-800-537-5200
Freeport - McMoRan Oil & Gas	1-805-739-9111
Kern Energy.....	1-661-845-0761
Lodi Gas Storage, L.L.C.	1-800-307-1107
Marathon Pipe Line LLC.....	1-833-675-1234
Martinez Pipeline Company.....	1-877-662-4575
Midstream Energy Partners (USA), LLC	1-866-295-2176
Mojave Pipeline Company, L.L.C.	1-800-334-8047
Paramount Pipeline LLC.....	1-562-244-4508
Phillips 66 Pipeline LLC.....	1-877-267-2290
Plains Pipeline L.P.	1-800-708-5071
Shell Pipeline Company LP.....	1-800-922-3459
SoCalGas	1-800-427-2200
SoCal Holding LLC.....	1-562-624-3452
TC Energy Natural Gas	1-800-447-8066
THUMS.....	1-562-624-3452
Tidelands	1-562-624-3452
Torrance Logistics Company	1-877-662-4575
TransMontaigne Product Services Inc.....	1-800-732-8140
Valero Refining Company - California	1-707-745-7562
Valero - Ultramar	1-562-491-6803
Vopak Terminal Los Angeles Inc.....	1-310-549-2221
World Oil Terminals	1-562-432-1737
Zenith Energy West Coast Terminals LLC.....	1-866-497-2284

Note: The above numbers are for emergency situations.

Additional pipeline operators may exist in your area.

Visit the National Pipeline Mapping System at www.npms.phmsa.dot.gov for companies not listed above.

<u>ONE-CALL SYSTEM</u>	<u>PHONE NUMBER</u>
Underground Service Alert of Southern California (DigAlert)	1-800-422-4133
USA North 811	1-800-642-2444
National One-Call Referral Number.....	1-888-258-0808
National One-Call Dialing Number	811

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Pipeline Purpose and Reliability

- Critical national infrastructure
- Over 2.7 million miles of pipeline provide 65% of our nation's energy
- 20 million barrels of liquid product used daily
- 21 trillion cubic feet of natural gas used annually

Safety Initiatives

- Pipeline location
 - Existing right-of-way (ROW)
- ROW encroachment prevention
 - No permanent structures, trees or deeply rooted plants
- Hazard awareness and prevention methods
- Pipeline maintenance activities
 - Cleaning and inspection of pipeline system

Leak Recognition and Response

- Sight, sound, smell – indicators vary depending on product
- Diesel engines – fluctuating RPMs
- Black, dark brown or clear liquids/dirt blowing into air/peculiar odors/dead insects around gas line/dead vegetation
- Rainbow sheen on the water/mud or water bubbling up/frozen area on ground/frozen area around gas meter
- Any sign, gut feeling or hunch should be respected and taken seriously
- Take appropriate safety actions ASAP

High Consequence Area (HCA) Regulation

- Defined by pipeline regulations 192 and 195
- Requires specialized communication and planning between responders and pipeline/gas personnel
- May necessitate detailed information from local response agencies to identify HCAs in area

One-Call

- One-Call centers are not responsible for marking lines
- Each state has different One-Call laws. Familiarize yourself with the state you are working in
- Not all states require facility owners to be members of a One-Call
- You may have to contact some facility owners on your own if they are not One-Call members
- In some states, homeowners must call before they dig just like professional excavators



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

811 What is 811?
It's FREE

National Call Before You Dig Phone Number	Connects Excavators with Regional Notification Center	Notifies Utility Operators about Excavation	Utility Operators Identify Location of Buried Lines
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The Players

Excavator Notification Center Utility Operator Regulator

Excavator

Who is the Excavator?
4216(h)
...any person, firm, contractor or subcontractor, owner, operator, utility, association, corporation, partnership, business trust, public agency, or other entity that, with their own employees or equipment, performs any excavation.

Excavator



What is Excavation?

4216(g)

...any operation in which earth, rock, or other material in the ground is moved, removed, or otherwise displaced by means of tools, equipment, or explosives in any of the following ways: grading, trenching, digging, ditching, drilling, augering, tunneling, scraping, cable or pipe plowing and driving, or any other way.

Notification Center



Who is the Regional Notification Center?

4216(q)

...a nonprofit association or other organization of operators of subsurface installations that provides advance warning of excavations or other work close to existing subsurface installations...

REGIONAL NOTIFICATION CENTERS



811 or 800-642-2444
undergroundservicealert.org



811 or 800-422-4133
digalet.org

Notification Center



UNDERGROUND SERVICE ALERT

- Established in 1975
- Service Area covers 210,000 mi²
- Over 1,500 Members
- Serve 20.5 Million People
- Open 24/7

Utility
Operator



Who is the Operator?

4216(o)
any person, corporation,
partnership, business trust, public
agency, or other entity that owns,
operates, or maintains a subsurface
installation.

Utility
Operator



Required to be Members

4216.1
Every operator of a subsurface
installation, except the Department
of Transportation, shall become a
member of, participate in, and
share in the costs of, a regional
notification center.

Regulator



Who is the Regulator?

4216(b)
"Board" means the California
Underground Facilities Safe Excavation
Board, also known as the "Dig Safe
Board."

Regulator



Responsible for:

- 4216.12(b)
1. Coordinate education and outreach activities that encourage safe excavation practices
 2. Develop standards
 3. Investigate possible violations of this article
 4. Enforce this article to the extent authorized by subdivision (e) of Section 4216.6



Why Use 811?

- Protects you and the community from dangers of damaged utilities
- Avoid expensive utility repairs
- Conserve resources
- Avoid excavation downtime
- Required by law

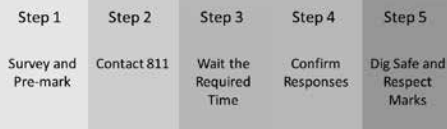


Why Use 811?

4216.2(b)

Except in an emergency, an excavator planning to conduct an excavation shall notify the appropriate regional notification center of the excavator's intent to excavate...

The 811 Process



Step 1 Survey and Pre-mark

4216.2(a)

Before notifying the appropriate regional notification center, an excavator planning to conduct an excavation shall delineate the area to be excavated.

Step 1 Survey and Pre-mark

4216.2(a)

If the area is not delineated, an operator may, at the operator's discretion, choose not to locate and field mark until the area to be excavated has been delineated.

Step 1 Survey and Pre-mark

4216(d)

"Delineate" means to mark in white the location or path of the proposed excavation using the guidelines in Appendix B of the "Guidelines for Excavation Delineation" published in the most recent version of the Best Practices guide of the Common Ground Alliance.

Step 1 Survey and Pre-mark

Delineation Requirements

- Marked in white
- Encompass entire excavation area
- Include Company Identifier
- Marked with Paint, Flags, Stakes, Whiskers or combination of these methods

Step 2 Contact 811

4216.2(a)

Except in an emergency, an excavator planning to conduct an excavation shall notify the appropriate regional notification center of the excavator's intent to excavate at least two working days, and not more than 14 calendar days, before beginning that excavation.

Step 2 Contact 811

4216(f)(1)

“Emergency” means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.

Step 2 Contact 811

Design Ticket (in development)



Step 2 Contact 811

3 Ways to Contact 811

Calling 811



3 actions per call
Spanish speaking reps

Desktop



OneCallAccess

Mobile App



USA North – CA
IOS & Android

Area of Continual Excavation

In 2017, lawmakers created an “Area of Continual Excavation” (ACE) ticket that is valid for one calendar year. This ticket is available to farmers and certain flood control facility operators.

Step 3 Wait the Required Time



Step 3 Wait the Required Time

When will the operator respond?

4216.3(a)(1)(A)

Unless the excavator and operator mutually agree to a later start date and time, or otherwise agree to the sequence and timeframe in which the operator will locate and field mark, an operator shall do one of the following before the legal excavation start date and time:

Step 3 Wait the Required Time

How will the operator respond?

4216.3(a)(1)(A)

1. Locate and field mark within the area delineated...
2. ...provide information to an excavator where the operator's active or inactive subsurface installations are located
3. Advise the excavator it operates no subsurface installations in the area delineated for excavation

Step 3 Wait the Required Time

Digging around high priority lines

4216(j)

means high-pressure natural gas pipelines with normal operating pressures greater than 415kPA gauge (60psig), petroleum pipelines, pressurized sewage pipelines, high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60kv, or hazardous materials pipelines that are potentially hazardous to workers or the public if damaged.

Step 3 Wait the Required Time

Digging around high priority lines

4216.2(c)

When the excavation is proposed within 10 feet of a high priority subsurface installation, the operator of the high priority subsurface installation shall notify the excavator of the existence of the high priority subsurface installation to set up an onsite meeting prior to the legal excavation start date and time or at a mutually agreed upon time.

Step 3 Wait the Required Time

Digging around high priority lines

4216.2(c)

Purpose of the meeting is to:

- Discuss methods and tools of excavation
- Gather information from the operator to assist in verifying the location of the subsurface installation

Cannot begin digging until onsite meeting has taken place.

Step 3 Wait the Required Time

Return Trip Notification

Utility Locator cannot respond due to excavator error such as:

- Failure to properly delineate excavation area
- Missing site access information

After error has been resolved, you may request a locator to return to site. Locator has additional two working days to respond.

Step 4 Confirm Responses

4216.2(g)

Unless an emergency exists, an excavator shall not begin excavation until the excavator receives a response from all known operators of subsurface installations within the delineated boundaries of the proposed area of excavation

Step 4 Confirm Responses

Using EPR to Track Responses

Electronic Positive Response acts as a log of how a Utility Operator has responded to you ticket

Excavators can view each Utility Operator's response inside their OneCallAccess account

Step 4 Confirm Responses

No Response

4216.3(e)

The excavator shall notify the appropriate regional notification center of the failure of an operator to identify subsurface installations...

Step 5 Dig Safe and Respect Marks

Utility Markings

4216(f)(1)

"Locate and field mark" means to indicate the existence of any owned or maintained subsurface installations by using the guidelines in Appendix B of the "Guidelines for Operator Facility Field Delineation"

Step 5 Dig Safe and Respect Marks

Utility Markings must include:

- The appropriate color for their facility type
- Their company name identifier when other companies are using the same color
- Total number of subsurface installations and the width of each facility
- A description of the facility

Step 5 Dig Safe and Respect Marks

Tolerance Zone

4216.4(a)(1)

...if an excavation is within the tolerance zone of a subsurface installation, the excavator shall determine the exact location of the subsurface installations in conflict with the excavation using hand tools...

Step 5 Dig Safe and Respect Marks

Tolerance Zone

4216(u)

“Tolerance zone” means 24 inches on each side of the field marking placed by the operator...

Step 5 Dig Safe and Respect Marks

Tolerance Zone

4216(f)

“Hand tool” means a piece of equipment used for excavating that uses human power and is not powered by any motor, engine, hydraulic, or pneumatic device.

Step 5 Dig Safe and Respect Marks

Tolerance Zone

Recommended to hand dig down to the depth of your proposed excavation.

Step 5 Dig Safe and Respect Marks

Remarks

4216.3(b)

If the field marks are no longer reasonably visible, an excavator shall renotify the regional notification center with a request for remarks that can be for all or a portion of the excavation. Excavation shall cease in the area to be remarked.

Step 5 Dig Safe and Respect Marks

Remarks

4216.3(b)

If the delineation markings are no longer reasonably visible, the excavator shall redelineate the area to be remarked.

Step 5 Dig Safe and Respect Marks

Damages

4216.4(c)(1)

An excavator discovering or causing damage to a subsurface installation, including all breaks, leaks, nicks, dents, gouges, grooves, or other damage to subsurface installation lines, conduits, coatings, or cathodic protection, shall immediately notify the subsurface installation operator.

Online Ticket Support



Web Operations Department
weboperations@usan.org

Contact Us

Chris Botting
 Education Coordinator
 Chris.Botting@usan.org



EXCAVATOR Dredging Operations

If your company conducts dredging operations, shoreline stabilization or pile driving activities, please be aware of the following:

- Underground hazardous liquids and natural gas pipelines do traverse lakes and navigable waterways
- 811 requirements to submit a one-call ticket prior operations commencing, to include a sub-aqueous ticket option
- Identify all pipeline warning markers near the shorelines where you will be working
- Contact the pipeline company as part of your pre-planning before work begins



EXCAVATOR Integrity Management

Pipeline companies are required to have Integrity Management programs to insure safe and efficient operations:

- Internal and external cleaning and inspection, of the pipeline and affected areas
 - Rights-of-Way and valves
- Supervisory Control and Data Acquisition (SCADA)
- Identification of High Consequence Areas (HCA)
- Aerial Rights-of-Way Patrols
- Public Awareness Outreach to stakeholders
- Participation as a member of 811
- Operator Qualification (OQ) Training
- Local Distribution Company (LDC)
 - Meter Testing
 - Leak Surveys
- May also be utilized on transmission pipelines



EXCAVATOR Product Characteristics

Hazardous Liquids

- ER Guide 128 (Pages 192-193)
- Crude oil, jet fuel, gasoline and other refined products
 - Liquid in and liquid out of the pipeline

Highly Volatile Liquids

- ER Guide 115 (Pages 166-167)
- Propane, Butane, Ethane and natural gas liquids
 - Liquid in and vapor out of the pipeline

Natural Gas

- ER Guide 115 (Pages 166-167)
- Gas in and gas out of the pipeline
 - Odorant Mercaptan added where required



EXCAVATOR Product Characteristics Resources

Mobile Applications: Android and iPhone

 ERG 2020 Emergency Response Guidebook 2020 Edition 2019	 Chemical Hazards Pocket Guide 2019 Edition 2019
 WISER Response Western States Institute of Technology 2019 As of February 2019, WISER will replace all the WISER information stored by emergency responders. 2019	 Chemical Safety Data Sheets - ICSC 2019 Edition 2019
 ICAMMO Chemicals International Chemical and Environmental Monitoring Association 2019	 NIOSH Mobile Pocket Guide 2019 Edition 2019

811 *Pinetree*

EXCAVATOR Above Ground Storage Tanks



Considerations when responding to tank farms/ terminals

Work with your local operator to:

- Develop an effective response plan
- Identify products and hazards
- Determine evacuation radius

Response recommendations:

- Cool tank(s) or nearby containers by flooding with water
- Use unmanned hose holders/monitor nozzles
- Do not direct water at safety devices or icing may occur
- Let product burn, even after air supply lines/systems is closed
- Beware of the potential for **Boiling Liquid Expanding Vapor Explosion (BLEVE)**

811 *Pinetree*

EXCAVATOR Local Distribution Systems



Caution

- Be aware, not all natural gas leaks are from excavation, unintended leaks from stoves, water, heaters, furnaces, etc. can occur
- When called out on natural gas leak events, use combustible gas indicators
- Microcap can be stopped as it travels through soil
- Frost heaves, breaking pipes
- Gas meter breaks due to snow buildup from melting snow falling from roofs

Excess flow valve meter tags

Identification tags [192.381(c)]

- The presence of an excess flow valve on the service lines must be marked with an identification tag. The identification tag will typically be located at the top of the service riser below the meter stop valve






811 *Pinetree*

EXCAVATOR Excess Flow Valve (EFV)

Local Distribution Lines

- Automatic reduction of gas flow should a service line break
- **May not** completely stop the flow of natural gas
- **May not** hear a distinct hissing sound
- Migration and ignition sources may still exist
- Always work a coordinated response with your local operator
- **Not all service lines have an EFV installed**

811 *Pinetree*

EXCAVATOR RESPONSIBILITIES:

- Call Before You Dig - It's the Law!
- Wait the required time for the markings!
(state specific time – check your local One Call Law)
- Tolerance Zones – May vary by state and/or company!
- Respect the marks!
- Dig with care!

RISK CONSIDERATIONS

- Type/volume/pressure/location/geography of product
- Environmental factors – wind, fog, temperature, humidity
- Sight, sound, smell – indicators vary depending on product
- Black, dark brown or clear liquids/dirt blowing into air/peculiar odors/dead insects around gas line/dead vegetation
- Rainbow sheen on the water/mud or water bubbling up/frozen area on ground/frozen area around gas meter
- Other utility emergencies

PIPELINE MARKERS

The U.S. Department of Transportation (DOT) requires the use of signs to indicate the location of underground pipelines. Markers like these are located on road, railroad, and navigable waterway crossings. Markers are also posted along the pipeline right-of-way. Markers may not be located directly over the pipeline it marks.

The markers display:

- The product transported
- The name of the pipeline operator
- The operator's emergency number



- White Lining (Pre-marking)
 - One Call Facility Request
 - One Call Access
 - Locate Reference Number
-
- Separate Locate Request
 - Pre-excavation Meeting
 - Facility Relocations
 - One Call Reference Number at Site
 - Contact Names and Numbers
 - Positive Response
 - Facility Owner/Operator Failure to Respond
 - Locate Verification
 - Work Site Review with Company Personnel
 - Documentation of Marks
 - Facility Avoidance
 - Marking Preservation
 - Excavation Observer
 - Excavation Tolerance Zone
 - Excavation within the Tolerance Zone
 - Vacuum Excavation
 - Mismarked Facilities
 - Exposed Facility Protection
 - Locate Request Updates
 - Facility Damage Notification
 - Notification of Emergency Personnel
 - Emergency Coordination with Adjacent Facilities
 - Emergency Excavation
 - Backfilling
 - As-built Documentation
 - Trenchless Excavation
 - No Charge for Providing Underground Facility Locations
 - Federal and State Regulations



Signs Of A Pipeline Release

SIGHT*

- Liquid on the ground
- Rainbow sheen on water
- Dead vegetation in an otherwise green area
- Dirt blowing into the air
- White vapor cloud
- Frozen area on ground

*Signs vary based upon product

SMELL

- Odors such as gas or oil
- Natural gas is colorless and odorless
 - Unless Mercaptan has been added (*rotten egg odor*)

OTHER - NEAR PIPELINE OPERATIONS

- Burning eyes, nose or throat
- Nausea

SOUND

- A hissing or roaring sound

What To Do If A Leak Occurs

- Evacuate immediately upwind
- Eliminate ignition sources
- Advise others to stay away
- **CALL 911** and the pipeline company – number on warning marker
 - Call collect if necessary
- Make calls from safe distance – not “hot zone”
- Give details to pipeline operator:
 - Your name
 - Your phone number
 - Leak location
 - Product activity
 - Extent of damage
- DO NOT drive into leak or vapor cloud
- DO NOT make contact with liquid or vapor
- DO NOT operate pipeline valves (*unless directed by pipeline operator*):
 - Valve may be automatically shut by control center
 - Valve may have integrated shut-down device
 - Valve may be operated by qualified pipeline personnel only, unless specified otherwise
- Ignition sources may vary – a partial list includes:
 - Static electricity
 - Metal-to-metal contact
 - Pilot lights
 - Matches/smoking
 - Sparks from telephone
 - Electric switches
 - Electric motors
 - Overhead wires
 - Internal combustion engines
 - Garage door openers
 - Firearms
 - Photo equipment
 - Remote car alarms/door locks
 - High torque starters – diesel engines
 - Communication devices

Pipeline Emergency

Call Gas Control Or Pipeline Control Center

Use **Pipeline Emergency Response Planning**

Information Manual for contact information

Phone number on warning markers

Use state One-Call System, if applicable

Control Center Needs To Know

Your name & title in your organization

Call back phone number – primary, alternate

Establish a meeting place

Be very specific on the location (**use GPS**)

Provide City, County and State

Injuries, Deaths, Or Property Damage

Have any known injuries occurred?

Have any known deaths occurred?

Has any severe property damage occurred?

Traffic & Crowd Control

Secure leak site for reasonable distance

Work with company to determine safety zone

No traffic allowed through any hot zone

Move sightseers and media away

Eliminate ignition sources

Fire

Is the leak area on fire?

Has anything else caught on fire besides the leak?

Evacuations

Primary responsibility of emergency agency

Consult with pipeline/gas company

Fire Management

Natural Gas – DO NOT put out until supply stopped

Liquid Petroleum – water is NOT recommended; foam IS recommended

Use dry chemical, vaporizing liquids, carbon dioxide

Ignition Sources

Static electricity (*nylon windbreaker*)

Metal-to-metal contact

Pilot lights, matches & smoking, sparks from phone

Electric switches & motors

Overhead wires

Internal combustion engines

Garage door openers, car alarms & door locks

Firearms

Photo equipment

High torque starters – diesel engines

Communication devices – not intrinsically safe

In 1999, the Department of Transportation sponsored the Common Ground Study. The purpose of the Common Ground Study was to identify and validate existing best practices performed in connection with preventing damage to underground facilities. The collected best practices are intended to be shared among stakeholders involved with and dependent upon the safe and reliable operation, maintenance, construction, and protection of underground facilities. The best practices contain validated experiences gained that can be further examined and evaluated for possible consideration and incorporation into state and private stakeholder underground facility damage prevention programs.

The current Best Practices Field Manual is divided into nine chapters that provide a collection of current damage prevention best practices. The nine chapters include:

1. Planning & Design Best Practices
2. One Call Center Best Practices
3. Location & Marking Best Practices
4. Excavation Best Practices
5. Mapping Best Practices
6. Compliance Best Practices
7. Public Education Best Practices
8. Reporting & Evaluation Best Practices
9. Miscellaneous Practices

To view the latest version of the Best Practices please visit www.commongroundalliance.com



Pipelines In Our Community

According to National Transportation Safety Board statistics pipelines are the safest and most efficient means of transporting natural gas and petroleum products, which are used to supply roughly two-thirds of the energy we use. These pipelines transport trillions of cubic feet of natural gas and hundreds of billions of ton/miles of liquid petroleum products in the United States each year.

This system is comprised of three types of pipelines: transmission, distribution and gathering. The approximately 519,000 miles of transmission pipeline* transport products, including natural gas and petroleum products, across the country and to storage facilities. Compressor stations and pumping stations are located along transmission and gathering pipeline routes and help push these products through the line.

Approximately 2.2 million miles of distribution pipeline* is used to deliver natural gas to most homes and businesses through underground main and utility service lines. Onshore gathering lines are pipelines that transport gas from a current production operation facility to a transmission line or main. Production operations are piping and equipment used in production and preparation for transportation or delivery of hydrocarbon gas and/or liquids.

*mileage according to the Pipeline Hazardous Materials Safety Administration (PHMSA).



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

Training Center

Supplemental training available for agencies and personnel that are unable to attend:

- Train as your schedule allows
- Download resources including pipeline operator specific information
 - Sponsoring pipeline operator contact information
 - Product(s) transported
- Receive Certificate of Completion

Visit <https://trainingcenter.pdigm.com/> to register for training



Damage Prevention Programs

Pursuant to 49 CFR Parts 192.614 (c)(2)(i) and 195.442 (c)(2)(i) pipeline operators must communicate their Damage Prevention Program's "existence and purpose" to the public in the vicinity of the pipeline and persons who normally engage in excavation activities in the area in which the pipeline is located.

State and federally regulated pipeline companies maintain Damage Prevention Programs. The purpose of which is to prevent damage to pipelines and facilities from excavation activities, such as digging, trenching, blasting, boring, tunneling, backfilling, or by any other digging activity.

Pipeline Markers

The U.S. Department of Transportation (DOT) requires the use of signs to indicate the location of underground pipelines. Markers like these are located on road, railroad, and navigable waterway crossings. Markers are also posted along the pipeline right-of-way.

The markers display:

- The material transported
- The name of the pipeline operator
- The operator's emergency number

MARKER INFORMATION

- Indicates area of pipeline operations
- May have multiple markers in single right-of-way
- May have multiple pipelines in single right-of-way
- DOES NOT show exact location
- DOES NOT indicate depth (*never assume pipeline depth*)
- DOES NOT indicate pipeline pressure



Call Before You Dig

Statistics indicate that damage from excavation related activities is a leading cause of pipeline accidents. If you are a homeowner, farmer, excavator, or developer, we need your help in preventing pipeline emergencies.

1. Call your state's One-Call center before excavation begins - regulatory mandate as state law requires.
2. Wait the required amount of time.
3. A trained technician will mark the location of the pipeline and other utilities (private lines are not marked).
4. Respect the marks.
5. Dig with care.



American Public Works Association (APWA) Uniform Color Code

	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

OSHA General Duty Clause

Section 5(a)(1) of the Occupational Safety and Health Act (OSHA) of 1970, employers are required to provide their employees with a place of employment that "is free from recognizable hazards that are causing or likely to cause death or serious harm to employees."

<https://www.osha.gov/laws-regs/oshact/section5-duties>

Product Characteristics

PRODUCT	LEAK TYPE	VAPORS
HIGHLY VOLATILE LIQUIDS [SUCH AS: BUTANE, PROPANE, ETHANE, PROPYLENE, AND NATURAL GAS LIQUIDS (NGL)]	Gas	Initially heavier than air, spread along ground and may travel to source of ignition and flash back. Product is colorless, tasteless and odorless.
HEALTH HAZARDS	Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Fire may produce irritating and/or toxic gases.	

PRODUCT	LEAK TYPE	VAPORS
NATURAL GAS	Gas	Lighter than air and will generally rise and dissipate. May gather in a confined space and travel to a source of ignition.
HEALTH HAZARDS	Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.	

PRODUCT	LEAK TYPE	VAPORS
HAZARDOUS LIQUIDS [SUCH AS: CRUDE OIL, DIESEL FUEL, JET FUEL, GASOLINE, AND OTHER REFINED PRODUCTS]	Liquid	Initially heavier than air and spread along ground and collect in low or confined areas. Vapors may travel to source of ignition and flash back. Explosion hazards indoors, outdoors or in sewers.
HEALTH HAZARDS	Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution.	

Pipeline Damage Reporting Law As Of 2007

H.R. 2958 Emergency Alert Requirements

Any person, including a government employee or contractor, who while engaged in the demolition, excavation, tunneling, or construction in the vicinity of a pipeline facility;

- A. Becomes aware of damage to the pipeline facility that may endanger life or cause serious bodily harm or damage to property; or
- B. Damages the pipeline facility in a manner that may endanger life or cause serious bodily harm or damage to property, shall promptly report the damage to the operator of the facility and to other appropriate authorities.

Websites:

Call Before You Clear

www.callbeforeyouclear.com

Common Ground Alliance

www.commongroundalliance.com

Federal Office of Pipeline Safety

www.phmsa.dot.gov

National One-Call Dialing Number: 811

www.call811.com

National Pipeline Mapping System

www.npms.phmsa.dot.gov

National Response Center

<https://www.epa.gov/emergency-response/national-response-center> or 800-424-8802

Occupational Safety & Health Administration (OSHA)

www.osha.gov

Paradigm Liaison Services, LLC

www.pdigm.com

United States Environmental Protection Agency (EPA)

www.epa.gov/comeo

Wireless Information System for Emergency Responders (WISER)

<https://wiser.nlm.nih.gov/>



Register for access to
Training Center
Code: 2023EX



Paradigm is public awareness. We provide public awareness and damage prevention compliance services to assist with the regulatory requirements of 49 CFR 192 and 195, as well as API RP 1162. Since 2001, the oil and gas industry has worked with Paradigm to fulfill public education and community awareness requirements.

Our history of implementing public awareness programs and compliance services pre-dates API RP 1162. Most of the pipeline industry's large, mid-sized and small operators, as well as many local distribution companies utilize Paradigm's compliance services.

In serving our clients, Paradigm performs full-scope compliance programs from audience identification through effectiveness measurement. In addition, we offer consulting services for plan evaluation and continuous improvement. At the completion of each compliance program, we provide structured documentation which precisely records all elements of the program's implementation to assist with audits.

Paradigm leads the way in industry service. Pipeline operators and local distribution companies trust in Paradigm to implement their public awareness and damage prevention programs. Each year we:

- Distribute 25 million pipeline safety communications
- Compile and analyze roughly 250,000 stakeholder response surveys
- Facilitate over 1,200 liaison programs
- Implement approximately 1,000 public awareness compliance programs
- Provide audit support and assistance with over 50 public awareness audits

Contact Paradigm for more information regarding custom public awareness solutions.

Contact us:

Paradigm Liaison Services, LLC
PO Box 9123
Wichita, KS 67277
(877) 477-1162
Fax: (888) 417-0818
www.pdigm.com



UNDERGROUND SERVICE ALERT

— NORTHERN CALIFORNIA & NEVADA —

UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA AND NEVADA

USA North 811 provides a free and effective Damage Prevention service that protects the communities and underground facilities in Central and Northern California, as well as the entire state of Nevada.

USA North 811 began operation in May of 1975 and incorporated as a Non-Profit Mutual Benefit Corporation in 1986. Our objective is to receive planned excavation reports from public or private excavators and to transmit those planned excavation reports to all participating members of USA North who may have facilities at that excavation site. Our members will:

1. Mark or stake the horizontal path of their facility, or
2. Provide information about the location of their facility, or
3. Advise the excavator of clearance for facilities that they own.

For more information visit our website at www.usanorth811.org.



UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

Underground Service Alert of Southern California, aka DigAlert, is the Free Notification Center for anyone digging in the following nine Southern California counties – Inyo, Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara and Ventura.

For more information visit our website at www.digalert.org.

CALIFORNIA

Underground Service Alert of Northern California and Nevada:
811 or 800-642-2444

Website: www.usanorth811.org

Hours: Open 24 hours a day, seven days a week

Advance Notice: 2 working days, not counting the date of notification, up to 14 calendar days

Marks Valid: 28 days (1 year for ACE tickets)

Law Link: <https://usanorth811.org/services/law-update>

*DOT exempt

TICKETS			STATE LAWS & PROVISIONS							NOTIFICATION EXEMPTIONS				NOTIFICATIONS ACCEPTED								
FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone
N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	24"

Underground Service Alert of Southern California: 811 or 800-422-4133

Website: www.digalert.org

Hours: 6:00 AM - 7:00 PM, M-F

Advance Notice: 2 working days, not counting the date of notification, up to 14 calendar days

Marks Valid: 28 days (1 year for ACE tickets)

Law Link: <https://www.digalert.org/calaw>

*DOT exempt

N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	24"
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Chart Reference: <https://pipelineawareness.org/media/1507/2019-excavation-safety-guide-pipeline-edition.pdf>



1.877.477.1162 • ca.pipeline-awareness.com