OHIO

EXCAVATOR®
PIPELINE SAFETY PROGRAM

PIPELINE SAFETY TRAINING

PROGRAM GUIDE

2025

EMERGENCY CONTACT LIST

COMPANY	EMERGENCY NUMBER
AEP Generation Resources - Darby Generating Station	**1-877-351-0486**
Air Products, LLC	**1-216-781-2817**
American Municipal Power	**1-877-603-2922**
Antero Midstream Corporation	**1-800-265-6503**
Ascent Resources, LLC	**1-740-260-7560**
BP Pipelines (North America), Inc.	**1-800-548-6482**
Buckeye Partners, L.P.	**1-800-331-4115**
CenterPoint Energy	**1-800-227-1376**
Cleveland Cliffs	**1-888-458-1465**
Citgo Petroleum Corp.	**1-800-471-9191**
Columbia Gas of Ohio	**1-800-344-4077**
Consolidated Gas and Bright Energy	**1-866-946-6600**
Diversified Gas & Oil Corporation	**1-877-711-1138**
DTM Uticia, LLC	**1-800-363-9541**
Eastern Gas Transmission and Storage	**1-888-264-8240**
Enbridge Gas Ohio	**1-877-542-2630**
Enbridge (U.S.) Inc. / Texas Eastern Transmission (Gas)	**1-800-231-7794**
Enbridge (U.S.) Inc. / Texas Eastern Transmission (Oil)	**1-800-858-5253**
Energy Transfer (Crude)	**1-800-753-5531**
Energy Transfer (NGL)	**1-800-375-5702**
Enterprise Products Operating LLC	**1-888-883-6308**
Equitrans Midstream	**1-855-740-1092**
Kimble Company	**1-800-201-0005**
Kinder Morgan's Utopia Pipeline System	**1-800-265-6000**
Lancaster Municipal Gas Dept.	**1-740-687-6670**
Linde	**1-800-926-9620**
Mid-Valley Pipeline	**1-800-753-5531**
MPLX - MarkWest Energy Partners Utica	**1-855-878-4859**
National Gas & Oil Cooperative / NGO Transmission, Inc.	**1-800-255-6815**
NEXUS Gas Transmission, LLC (Operated by Enbridge)	**1-855-329-1781**
North Coast Gas Transmission	**1-888-497-5665**
Ohio Gas Company	**1-800-331-7396**
or	**1-419-636-3642**
Ohio Valley Gas Corporation	**1-877-853-5501**
Panhandle Eastern Pipe Line	**1-800-225-3913**
Pembina Cochin LLC	**1-800-360-4706**
RH energytrans, LLC	**1-800-805-1556**
Richland Stryker Generation, LLC	**1-877-246-5100**
Rover Pipeline	**1-800-225-3913**
Shell Pipeline Company LP	**1-800-922-3459**
Southwestern Energy	**1-877-879-0376**
Suburban Natural Gas Company (in Lewis Center)	**1-740-548-2450**
Suburban Natural Gas Company (in Cygnet)	**1-419-655-2345**
Sunoco LLC	**1-800-786-7440**
Sunoco Pipeline	**1-800-786-7440**
Tait Electrical Generating Station, LLC	**1-877-351-0486**
Tallgrass / Rockies Express Pipeline	**1-877-436-2253**
Tennessee Gas Pipeline Company	**1-800-231-2800**
Texas Gas Transmission, LLC	**1-800-626-1948**
Toledo Refining Company, LLC	**1-419-698-6600**
Truck World	**1-877-351-0486**
UGI Energy Services	**1-855-511-4942**
Utility Pipeline	**1-888-784-6160**
Waterville Gas & Oil Company	**1-419-878-4972**
West Lorain Power	**1-877-351-0486**
Williams	**1-855-945-5762**

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.

ONE-CALL SYSTEM	PHONE NUMBER
Ohio Utilities Protection Service	**1-800-362-2764**
Oil and Gas Underground Protection Service	**1-800-925-0988**
National One-Call Referral Number	**1-888-258-0808**
National One-Call Dialing Number	**811**

Table of Contents

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

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

Pipeline Emergency Response Training

Contractor and Excavator Personnel

EXCAVATOR
PIPELINE SAFETY PROGRAM

Instructor: Randy Frank

EXCAVATOR

Paradigm

Industrial Overview

THERE ARE OVER THREE MILLION MILES OF PIPELINE

Paradigm

EXCAVATOR

Paradigm

Pipeline Operator Challenges

- Timely notification of the incident
- Denied entry at scene of incident
- Quick access to remote valves/ICP
- Getting equipment into the area
- Communications with incident command
- Clear lines of communication (both ways)
- Face to face meetings with local officials
- Pre-planning with emergency services

Do contractors and excavators face some of these same challenges?

EXCAVATOR

Paradigm

Local Operator Information*

- **Operator and/or company name**
- **Pipeline systems and products**
- **Location of pipelines**
- **Pipeline size/operating pressure(s)**
- **Operator Response(s) to a pipeline emergency**

*Information in the materials may not represent all pipeline companies in your area.

EXCAVATOR

Paradigm

Coordinated Response Exercise

- **Learn** your requirements and responsibilities prior to beginning excavating.
- **Acquaint** you with the operator's ability to respond to a pipeline emergency. And find out what the company responsibilities are once you notify 811 before you can dig.
- **Identify** the types of pipeline emergencies.
- **Plan** how all parties can engage in mutual assistance to minimize hazards to life, property and the environment.

Code of Federal Regulations (CFR): 49 CFR Parts 192 and 195

Roll Call: Excavators, Public Officials, Emergency Responders, and Pipeline Operators

EXCAVATOR

Program Resources

oups.org

oh.pipeline-awareness.com

OHIO811.org Before You Dig

EXCAVATOR

Safe Digging Practices

https://commongroundalliance.com/

EXCAVATOR

Safe Digging Practices and Resources

https://bestpractices.commongroundalliance.com/1-Introduction/101-Best-Practices-Manual-Version-200

EXCAVATOR


OHIO811.org
Before You Dig
Damage Prevention
Presentation


GAS
OHIO811 is the "Call Before You Dig" notification center for the state of Ohio.
OHIO811 is the communication link between those who own and operate underground utility facilities and those with a desire to excavate.

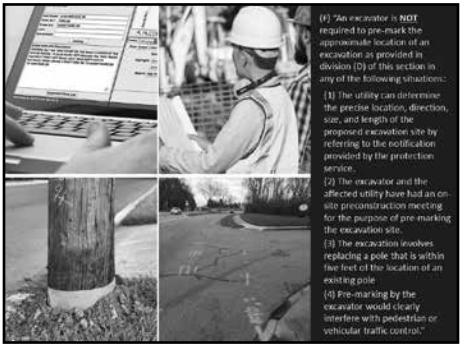

Notice the call before you dig decal on the trenching machine
OHIO811.ORG

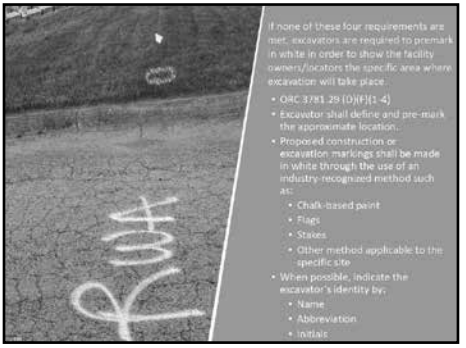

AGENDA
OHIO811
Excavator Responsibilities
OHIO811 Process - Being A Prepared Caller
Utility Owner Responsibilities
Marking Standards
Senate Bill 378


Our History
• Serving Ohio for 50+ Years
• Not-For-Profit
• Free Service
• Open 365 days a year
• Call Center – 6am-6pm
• Emergencies/RTE – 24/7
• Protection Service: OHIO811 does not mark lines


Excavator Responsibilities
ORC 3781.25 (I)
DEFINITION OF AN EXCAVATION
"Excavation means the use of hand tools, powered equipment, or explosives to move earth, rocks, or other materials in order to penetrate or bore or drill into the earth..."
Excavator Manual Page 5


White Lining
It is necessary to be specific about your area of excavation when contacting Ohio Utilities Protection Service.
The description must meet one of the following criteria:
Pre-marking in White Excavator Manual Page 21


(F) "An excavator is NOT required to pre-mark the approximate location of an excavation as provided in division (D) of this section in any of the following situations:
(1) The utility can determine the precise location, direction, size, and length of the proposed excavation site by referring to the notification provided by the protection service.
(2) The excavator and the affected utility have had an on-site preconstruction meeting for the purpose of pre-marking the excavation site.
(3) The excavation involves replacing a pole that is within five feet of the location of an existing pole
(4) Pre-marking by the excavator would clearly interfere with pedestrian or vehicular traffic control."



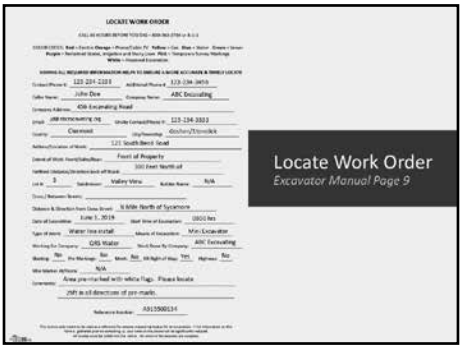
If none of these four requirements are met, excavators are required to premark in white in order to show the facility owners/locators the specific area where excavation will take place.

- ORC 3781.29 (D)(F)(1-4)
- Excavator shall define and pre-mark the approximate location.
- Proposed construction or excavation markings shall be made in white through the use of an industry-recognized method such as:
  - Chalk-based paint
  - Flags
  - Stakes
  - Other method applicable to the specific site
- When possible, indicate the excavator's identity by:
  - Name
  - Abbreviation
  - Initials

Being A Prepared Caller

Each Excavator Has to Have Their Own Ticket

ORC 3781.25(K) "...the person or persons responsible for making the actual excavation"



LOCATE WORK ORDER

Locate Work Order

Excavator Manual Page 9

- **Click, Call or Tap the App** – *Excavator Manual Page 8*
- Remote Ticket Entry
  - I-dig
  - e-dig
  - Ticket Updater
  - Call 800-362-2764 or 811


48h
ROUTINE 48 HOUR TICKET
DESIGN TICKET
COMPLEX PROJECT (LPRJ)
Three Types of Tickets


Routine 48 hour ticket
• ORC 3781.28(A) "... at least forty-eight hours but not more than 10 working days before commencing excavation, the excavator shall notify a protection service of the location of the excavation site..."
Emergencies
• ORC 3781.25(V) "sudden or 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"


(ORC 3781.27) Design Ticket – Facility owners have 10 working days to respond in one of the two manners listed below
1. Each utility shall mark the location of the underground utility facilities
• Items located to include
• Mains and primaries.
• Service lines are generally not located/marked in response to a design ticket
2. Provide drawings meeting the following criteria
• Drawn to scale
• Include locatable items
• Depict the location of the underground utility facilities


GOOD PLANS

BAD PLANS

- Complex Project
  - A complex project may progress over an extended period of time and / or be complex in size/scope and work type
- Process
  - Excavator calls OHIO811 to request a complex project / joint meet ticket
  - Excavator and facility owner / representative meet
  - A mutually agreed upon marking schedule is created
  - Excavator calls OHIO811 with project excavation tickets in accordance with mutually agreed upon marking schedule
  - Locator marks underground facilities as project excavation tickets are received
  - Excavation begins

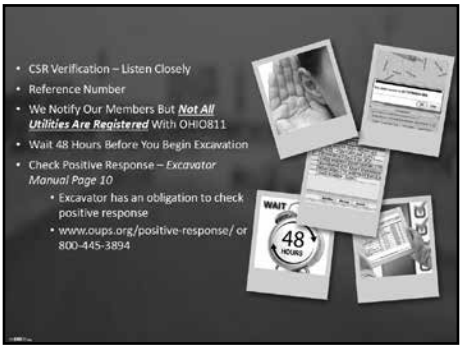
OHIO811 Ticket Process

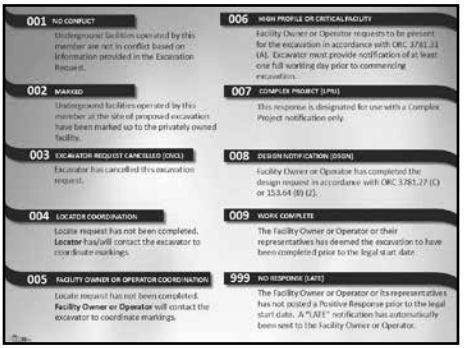
ALL INFORMATION SUBMITTED ON A TICKET IS IMPORTANT WHEN DETERMINING THE PROPER EXCAVATION AREA TO BE MARKED

A DESCRIPTION IS LIKE AN X ON A TREASURE MAP

REQUESTING SPECIFIC DIG AREAS AND PRE-MARKING IN WHITE HELP ASSURE MORE ACCURATE AND TIMELY MARKINGS

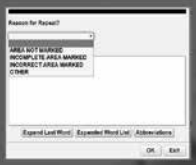

Mark The Entire Property
Replacing a Mailbox
CAN THE FACILITY OWNER/LOCATOR FIND THE DIG AREA VIA YOUR DESCRIPTION
REQUESTING UNNECESSARY LOCATE AREAS CAN HAVE A NEGATIVE EFFECT ON RECEIVING TIMELY LOCATES
SUBMITTING A TICKET REQUEST TOO FAR IN ADVANCE AND REQUESTING REMARKS WITHOUT A SCHEDULED DIG DATE CAN HINDER MULTIPLE STAKEHOLDERS

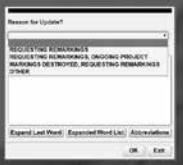

• CSR Verification – Listen Closely
• Reference Number
• We Notify Our Members But ***Not All Utilities Are Registered*** With OHIO811
• Wait 48 Hours Before You Begin Excavation
• Check Positive Response – *Excavator Manual Page 10*
• Excavator has an obligation to check positive response
• www.oups.org/positive-response/ or 800-445-3894
WAIT
48
HOURS


001 NO CONFLICT
Underground facilities operated by this member are not in conflict based on information provided in the Excavation Request.
002 MARKED
Underground facilities operated by this member at the site of proposed excavation have been marked up to the privately owned facility.
003 EXCAVATOR REQUEST CANCELLED (EXCL)
Excavator has cancelled this excavation request.
004 LOCATOR COORDINATION
Locate request has not been completed. **Locator** has/will contact the excavator to coordinate markings.
005 FACILITY OWNER OR OPERATOR COORDINATION
Locate request has not been completed. **Facility Owner or Operator** will contact the excavator to coordinate markings.
006 HIGH PROFILE OR CRITICAL FACILITY
Facility Owner or Operator requests to be present for the excavation in accordance with ORC 3781.31 (A). Excavator must provide notification of at least one full working day prior to commencing excavation.
007 COMPLEX PROJECT (LPRJ)
This response is designated for use with a Complex Project notification only.
008 DESIGN NOTIFICATION (DSGN)
Facility Owner or Operator has completed the design request in accordance with ORC 3781.27 (C) or 153.64 (B) (2).
009 WORK COMPLETE
The Facility Owner or Operator or their representatives has deemed the excavation to have been completed prior to the legal start date.
999 NO RESPONSE (LATE)
The Facility Owner or Operator or its representatives has not posted a Positive Response prior to the legal start date. A "LATE" notification has automatically been sent to the Facility Owner or Operator.


Remember to…
• Perform Site Assessment
• Dig With Care
• Update Marks That Are Destroyed Or Removed Before Excavation Is Completed

When to Repeat and/or Update a Ticket.....



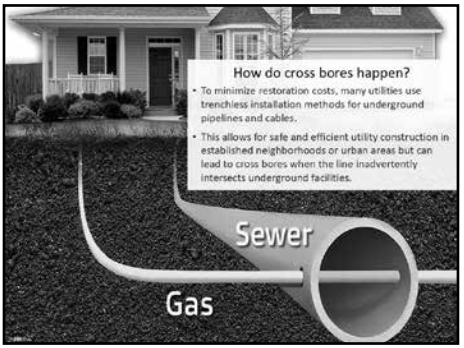


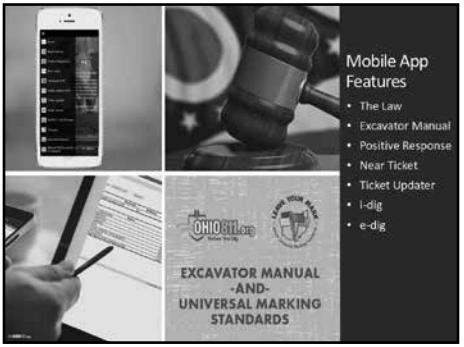
- When a notification request was not marked within the 48 hour notice
- Markings are incorrect or incomplete for any reason
- When a notification request needs to be remarked by the facility owners due to markings being destroyed or removed
- You never started your work within the 10 working days of the original start date and time

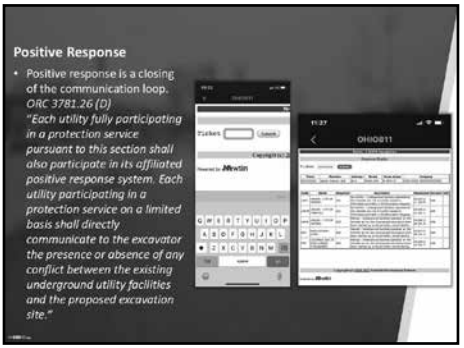
Use of Trenchless Technologies
Excavator Manual Page 5

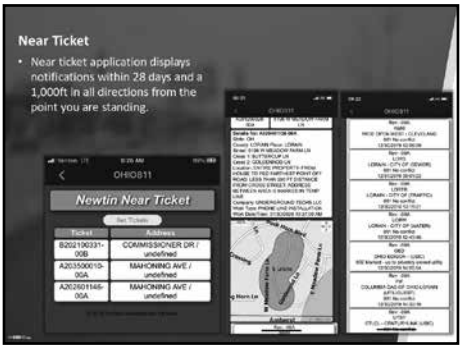
When utilizing trenchless excavation methods, the excavator must comply with the following requirements:

1. Expose all underground utility facilities at each crossing point to the installation depth of the new facility.
2. Expose all parallel facilities at the beginning and end. If in the tolerance zone, facility shall be exposed every 100 ft.
3. Maintain the proper clearances of existing facilities.




Mobile App Features
• The Law
• Excavator Manual
• Positive Response
• Near Ticket
• Ticket Updater
• i-dig
• e-dig
EXCAVATOR MANUAL -AND- UNIVERSAL MARKING STANDARDS


Positive Response
• Positive response is a closing of the communication loop. ORC 3781.26 (D)
"Each utility fully participating in a protection service pursuant to this section shall also participate in its affiliated positive response system. Each utility participating in a protection service on a limited basis shall directly communicate to the excavator the presence or absence of any conflict between the existing underground utility facilities and the proposed excavation site."

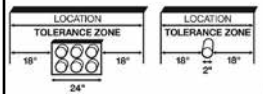

Near Ticket
• Near ticket application displays notifications within 28 days and a 1,000ft in all directions from the point you are standing.
OHIO811
Newtin Near Ticket
Ticket
Address
B202100331-00B
COMMISSIONER DR / undefined
A203500010-00A
MAHONING AVE / undefined
A202601146-00A
MAHONING AVE / undefined


e-dig
i-dig
Ticket Updater
e-dig locate request is the easy online homeowner dig request for non-emergency single address locates only
i-dig is a real-time, web-based ticket entry program for professional excavators, contractors, and utility facility owners.
Ticket Updater application allows excavators to update a dig notification that has been processed through ohio811 within the past 90 days

Ohio's Universal Marking Standards Topics

Marking Standards
ORC 3781.29(2)(C) "All underground facilities shall be marked in accordance with the Ohio universal marking standards..."

Excavator Manual Page 19



Tolerance Zone

ORC 3781.25(E) "...the site of the underground utility facility including the width of the underground utility facility plus eighteen inches on each side of the facility." Excavator Manual Page 13

Ohio law requires that the excavator observe the tolerance zone during excavation....

APWA Color Code

ORC 3781.29 (C) "A utility shall mark its underground facilities using the following color codes:..."

RED — Electric power lines, power conduits, lighting cables, and other energized wires, such as traffic signals	BLUE — Drinking / potable water
ORANGE — Telecommunication lines, fiber optic cables, alarm or signal lines, cable TV or conduits	PURPLE — Reclaimed Water, Irrigation and Slurry Lines
YELLOW — Natural gas, oil, steam, liquid petroleum, or other gaseous or flammable material	PINK — Temporary Survey Marking
GREEN — Sewers and Drain Lines	WHITE — Proposed Excavation

Excavator Manual page 20

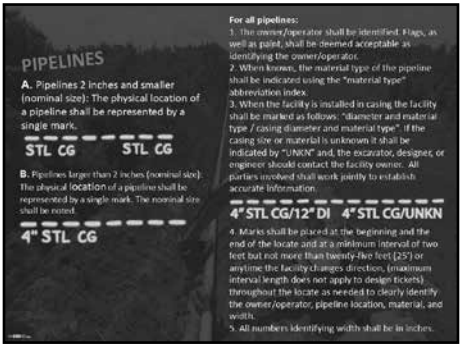
What is required with your marks?

1. Identify who owns the facility
2. Size
3. Material type

IDENTIFICATION ABBREVIATIONS

When marks are placed at the excavation site, the owner/ operator of a utility line shall be indicated by a letter or letters utilizing the APWA color code. These letters shall be legible and placed at the beginning and end of the locate and at intervals throughout the locate as needed to clearly identify the owner/operator. This may also be achieved by the use of flags that indicate the owner/operator of the facility.

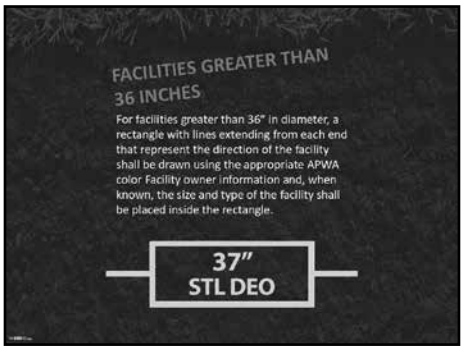
4" STL CG

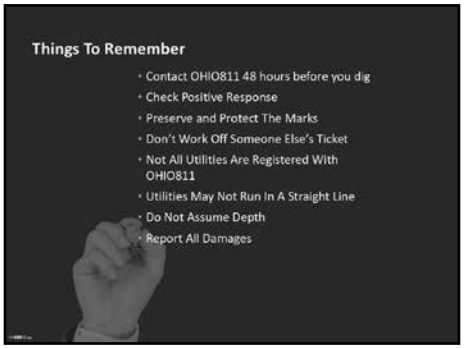

PIPELINES
A. Pipelines 2 inches and smaller (nominal size): The physical location of a pipeline shall be represented by a single mark.
STL CG STL CG
B. Pipelines larger than 2 inches (nominal size): The physical location of a pipeline shall be represented by a single mark. The nominal size shall be noted.
4" STL CG
For all pipelines:
1. The owner/operator shall be identified. Flags, as well as paint, shall be deemed acceptable as identifying the owner/operator.
2. When known, the material type of the pipeline shall be indicated using the "material type" abbreviation index.
3. When the facility is installed in casing the facility shall be marked as follows: "diameter and material type / casing diameter and material type". If the casing size or material is unknown it shall be indicated by "UNKN" and, the excavator, designer, or engineer should contact the facility owner. All parties involved shall work jointly to establish accurate information.
4" STL CG/12" DI 4" STL CG/UNKN
4. Marks shall be placed at the beginning and the end of the locate and at a minimum interval of two feet but not more than twenty-five feet (25') or anytime the facility changes direction, (maximum interval length does not apply to design tickets) throughout the locate as needed to clearly identify the owner/operator, pipeline location, material, and width.
5. All numbers identifying width shall be in inches.


CONDUIT/DUCT BANK
The term "conduit" shall be used for a single enclosure containing one or more facilities; the term "duct bank" shall be used for a structure containing two or more conduits.
A. For banks constructed with conduits sized 2 inches or less, the following information will be provided:
1. A single mark is used.
2. A diamond is placed within the mark.
3. The number of small-diameter conduits shall be indicated within the diamond symbol.
ATT
ATT
B. For duct banks containing conduits larger than 2 inches, the following information will be provided:
1. The duct bank boundary (the "width") is identified with marks after locating the outermost ducts within the bank.
2. The number of conduits shall be placed within the diamond. This diamond shall be placed within the duct bank boundary marks.
ATT
In situations where multiple conduits/ducts which are owned and/or operated by different companies are placed together in a bundle fashion, a conduit structure or duct bank marking symbol shall be used by the first operator marking the facility. Other operators owning facilities within the bundle shall verify the marks and add their owner/operator letter designation.
OF
ATT
C. For all conduits and duct banks:
1. The owner(s)/operator(s) shall be indicated using the facility owner identification code.
2. Marks shall be placed at the beginning and the end of the locate and at a minimum interval of two feet but not more than twenty-five feet (25') or anytime the facility changes direction, (maximum interval length does not apply to design tickets) throughout the locate as needed to clearly identify the owner/operator, the conduit/duct bank location, and the number of conduits. If known, indicate number of conduits in a duct bank.


OFFSET MARKS
In areas prone to the frequent destruction of marks, offset marks may be used in conjunction with the marks placed at the actual location of a facility. They are intended to be used as a supplemental means of marking.
1. A line is placed in conjunction with an arrow and a measurement (stated in feet), which specifies the distance from the reference line to the actual location of the facility.
2. The arrow indicates the direction from the reference line to the actual location of the facility.
3. The arrow shall be oriented at 90 degrees to the reference line.
4. The distance to the actual location of the facility, from the reference line, shall be placed on one side of the arrow.
5. The locator shall provide all of the necessary information which adequately identifies the specific facility in accordance with the marking standards. This information shall be placed on the side of the arrow which is not utilized for the "distance" information.
8'
DEO
4" STL


FACILITIES MARK ACCORDING TO RECORD
Facilities not marked via electronic equipment should be indicated in this manner, in appropriate facility color code.
M
BACK TIED/LOOP SERVICE
When known by records or documentation, the symbol shall be a ½ circle equaling 36" in width and 36" in length unless greater amount is identified.
Width
Length
M


FACILITIES GREATER THAN 36 INCHES
For facilities greater than 36" in diameter, a rectangle with lines extending from each end that represent the direction of the facility shall be drawn using the appropriate APWA color Facility owner information and, when known, the size and type of the facility shall be placed inside the rectangle.
37"
STL DEO

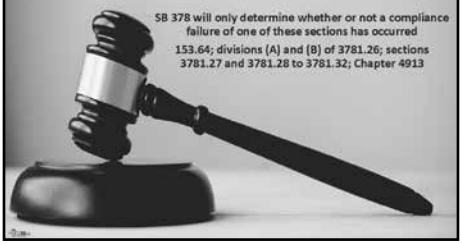

Things To Remember
Contact OHIO811 48 hours before you dig
Check Positive Response
Preserve and Protect The Marks
Don't Work Off Someone Else's Ticket
Not All Utilities Are Registered With OHIO811
Utilities May Not Run In A Straight Line
Do Not Assume Depth
Report All Damages


Senate Bill 378
Providing Enforcement of Ohio's Damage Prevention Law


What is Senate Bill 378?
Senate Bill 378 provides for the enforcement of Ohio's underground damage prevention laws
It became active on January 1, 2016

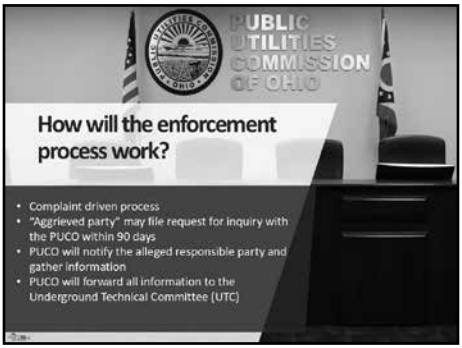
What is enforced?

Most sections of Ohio's damage prevention law will be enforced...



SB 378 will only determine whether or not a compliance failure of one of these sections has occurred

153.64; divisions (A) and (B) of 3781.26; sections 3781.27 and 3781.28 to 3781.32; Chapter 4913



How will the enforcement process work?

- Complaint driven process
- "Aggrieved party" may file request for inquiry with the PUCO within 90 days
- PUCO will notify the alleged responsible party and gather information
- PUCO will forward all information to the Underground Technical Committee (UTC)

What is the UTC?

- A group of 17 industry experts tasked with reviewing all reported compliance violations
- Representatives will be appointed by the state legislature and Governor
- The purpose of the UTC is to provide industry knowledge and insight during the review of reported violations

What is the primary function of the UTC?

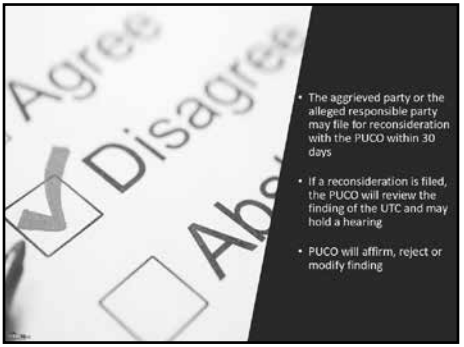
- The UTC is tasked with reviewing all reports submitted to them by the PUCO and determining whether or not a compliance failure occurred
- The PUCO must enforce all recommendations of the UTC

1ST TIME VIOLATIONS – TRAINING/EDUCATION REQUIREMENT, FINE OF UP TO $2,500 OR COMBINATION OF BOTH

2ND TIME VIOLATIONS – TRAINING/EDUCATION REQUIREMENT, FINE OF UP TO $5,000 OR COMBINATION OF BOTH

"PERSISTENT NONCOMPLIER"– PUCO MAY IMPOSE FINE OF UP TO $10,000, IN ADDITION TO RECOMMENDATION OF UTC

What are the fines/penalties for non-compliance?


Agree
Disagree
Abs
• The aggrieved party or the alleged responsible party may file for reconsideration with the PUCO within 30 days
• If a reconsideration is filed, the PUCO will review the finding of the UTC and may hold a hearing
• PUCO will affirm, reject or modify finding


How will the enforcement process be funded?
All utilities, excavators, developers and designers who participate in the one-call system will pay an annual registration fee not to exceed $50.00 to the PUCO
What happens to the monies collected as a result of the fines?
All fines collected will be deposited into the underground facilities protection fund and used solely to fund grants for underground utility damage prevention education awareness programs


Additional Resources
Visit www.OHIO811.org for valuable resources
Senate Bill 378
FAQ's
Enforcement Process Flow Chart


OHIO811 Contact Information
Call 800-362-2764 or 811
Mobile App - www.oups.org/oups-apps
i-dig - www.oups.org/idig
e-dig - www.oups.org/edig
i dig
App
e dig

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 Paradigm

Logging Operator Responsibilities

- Notify pipeline company before work begins
- No skidding of logs on right of way
- Crossing of pipeline must be approved
- Drop cut trees away from pipeline
- Do not remove existing cover
- Restore right of way

EXCAVATOR Paradigm

Right-of-Way (ROW) and Pipeline Markers

DAMAGE OR REMOVAL
OF THIS SIGN IS A FEDERAL
OFFENSE SUBJECT TO A
$5,000 FINE AND/OR
ONE YEAR IMPRISONMENT

REMOVE OR DESTROY A PIPELINE MARKER

Paradigm

EXCAVATOR Paradigm

Product Characteristics

Hazardous Liquids
ER Guide 128 (Pages 186-187)
- Crude oil, jet fuel, gasoline and other refined products
- **Liquid in and liquid out of the pipeline**

Highly Volatile Liquids
ER Guide 115 (Pages 160-161)
- Propane, Butane, Ethane and natural gas liquids
- **Liquid in and vapor out of the pipeline**

Natural Gas
ER Guide 115 (Pages 160-161)
- Gas in and gas out of the pipeline
- **Odorant Mercaptan added where required**

EXCAVATOR Paradigm

Petroleum Products Batching

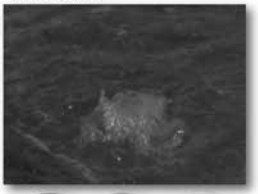
PIPELINE COMPANIES USE BATCHING LINES

Paradigm

EXCAVATOR Paradigm

Leak Recognition

- Pools of liquid on the ground near a pipeline
- Dense white cloud or fog over a pipeline
- Discolored vegetation surrounding a pipeline
- Unusual dry spot in an otherwise moist field
- Dirt blowing up from the ground
- Bubbling in marshland, rivers or creeks
- Oily sheen appearing on water surfaces
- Frozen ground near a pipeline
- Unusual noise coming from a pipeline
- Unusual smell or gaseous odor



SIGHT SOUND SMELL

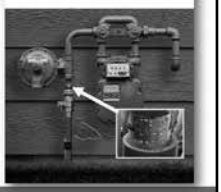
EXCAVATOR Paradigm

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
- Mercaptan can be stripped 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



EXCAVATOR Paradigm

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**

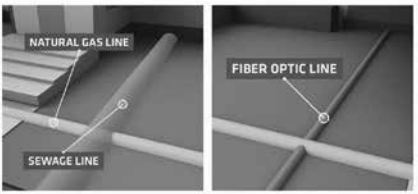
EXCAVATOR

Farm Taps

- Mainly in rural areas, some natural gas pipeline companies may have facilities commonly referred to as "farm tap"
- These natural gas settings are made up of valves, pipes, regulators, relief valves and a meter. It may be located near the home or within the general vicinity
- To report the smell of gas near a farm tap, call 911 and the local gas company from a safe distance
- The lines after a farm tap or residential meter may or may not be PRIVATE LINES, be aware of these

EXCAVATOR

Horizontal Directional Drilling (Cross Bore)



THROUGH A SEWAGE LINE, LOCAL DISTRIBUTION, TRANSMISSION

EXCAVATOR

Pipeline Awareness Training Center

Share with others in your crew, company, or agency unable to attend today's program

- Access to your local pipeline sponsor information
- Download the same documents presented in this program
- Certificate of completion provided upon completion of course

trainingcenter.pdigm.com
Use Code: 2025EX

Commissioner: Very informative and increased my awareness of the resources available to our county leadership in case of an emergency.

Geologist: Concise, informative, appreciate the audio and visual components, and the course documents provided.

Laborer: Great course, as a reminder of what's out there and how to deal with it.

PHEP Coordinator: Excellent course material, explanation and instruction.

Safety Manager: This is a good course to add to our Excavation Safety Program Training and New Hire Training Package.

Technician: Very informative and ESSENTIAL to anyone doing or planning to do any kind of excavation work!

EXCAVATOR

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

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

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

Common Ground Alliance Best Practices

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

CGA Common Ground Alliance℠

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.

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

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

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

TC TRAINING CENTER

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.

National One-Call Dialing Number:

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

For More Details Visit: www.call811.com

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	*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/cameo

Wireless Information System for Emergency Responders (WISER)
https://wiser.nlm.nih.gov/

TC
TRAINING CENTER

Register for access to
Training Center
Code: EX

Operator Information

Operator Name(s) / Contact Information	Type(s) of Pipeline Systems Operating	Location within County	Pipe Size and Operating Pressure Range(s)	Average Emergency Response Time(s)

About Paradigm

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

ABOUT OHIO811

A vital resource for Ohio residents and businesses, OHIO811 acts as a communication link between utility companies and individuals planning any digging activity.

IT'S FREE

OHIO811 is a not-for-profit public safety organization – there is no fee to contact us.

IT'S THE LAW

Ohio law requires that anyone digging contact OHIO811 at least 48 hours (excluding weekends and legal holidays) prior to beginning their work. Failure to contact OHIO811 could result in fines or penalties.

OHIO

Ohio811 800-362-2764
Website: www.oups.org
Hours: 24 hours, 7 days
Advance Notice: 48 hours but not more than 10 working days
Marks Valid: As long as visible and work begins within 10 days of original ticket
Law Link:
http://primis.phmsa.dot.gov/comm/DamagePreventionSummary.htm

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	Y	Y	Y	Y	N	Y	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	18"

Paradigm®

1.877.477.1162 • oh.pipeline-awareness.com