



Preventing Damage to Natural Gas Facilities



SOUTHWEST GAS



**SAFETY IS IN YOUR HANDS.
EVERY DIG. EVERY TIME.**

Division Damage Prevention Specialist – Kyle Loudon

Damage Prevention

Topics Covered



Importance of Safe Excavation



Overview of Arizona 811 Law



What to do in case of a Natural Gas Emergency



Common damage trends in New Business Developments

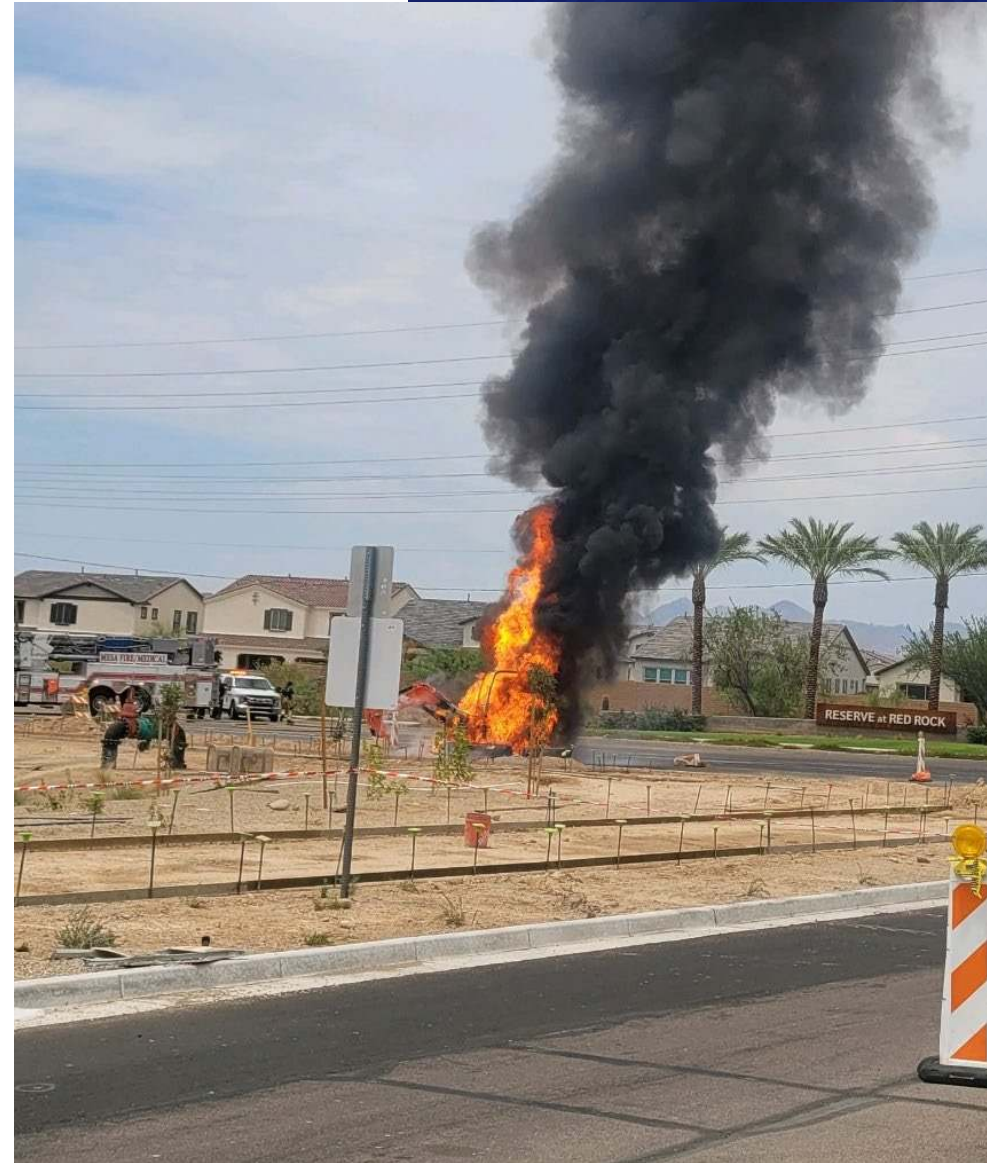


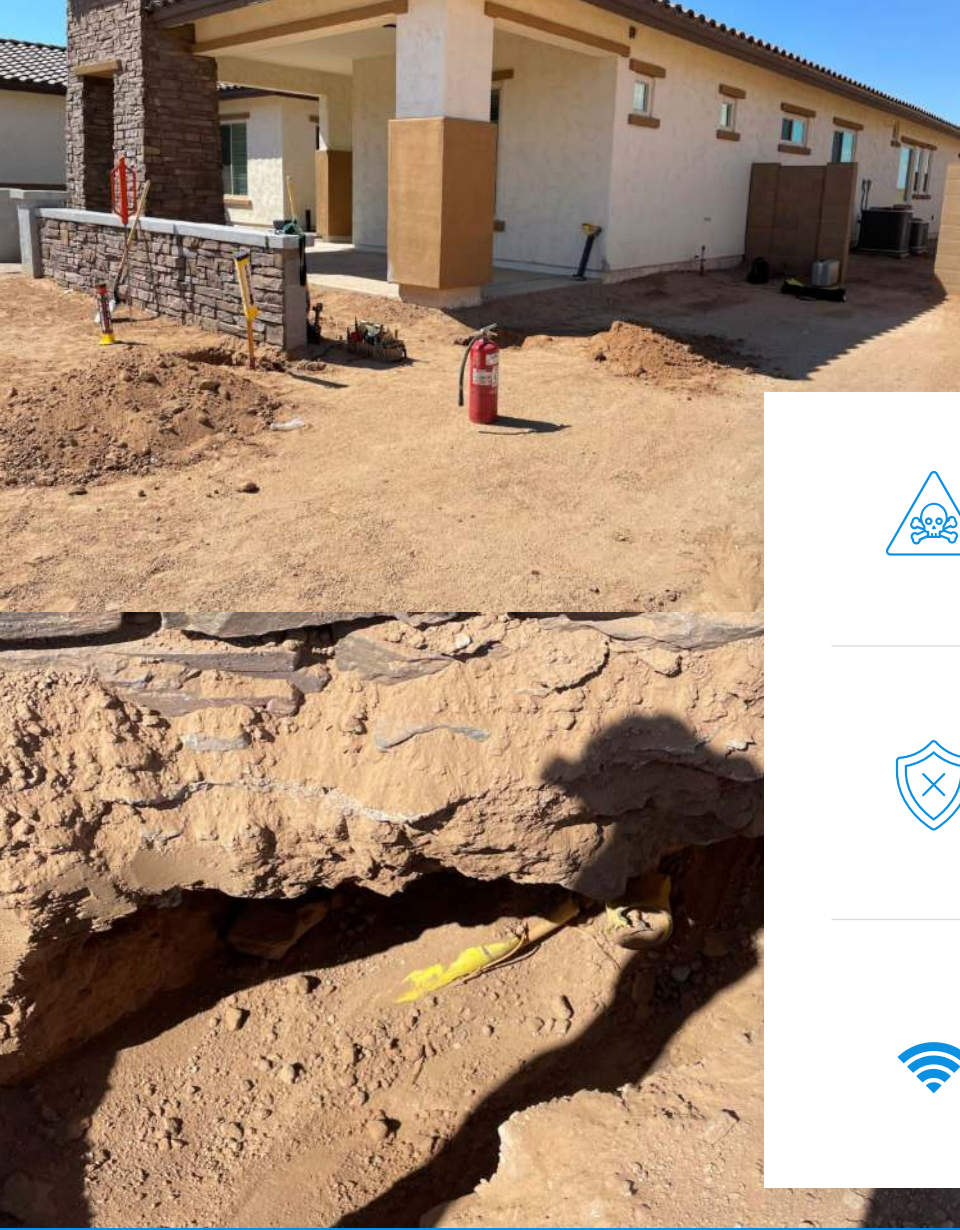
Damage Prevention Training for your Groups

Why is safe excavation important?

Broken gas lines could result in:

- Explosions/Fire
- Injuries/Fatalities
- Property damage
- Interruption of service/financial liability





Potential Hazards to People & Property



Small leaks can escalate quickly and may turn into a major incident later (EFVs)



Damaged pipe coating can cause corrosion of the and eventually result in a leak.



Broken tracer wire may result in missed or trouble locates in the future.

Properties of Natural Gas

Lighter than
Air – 0.65

Higher Ignition
Temperature -
1,200° F

Ignition Point
4% - 14% Gas
to Air

Odorless –
Mercaptan
added

Non-Toxic

Colorless

Process & Markings

- **1 DEFINE THE DIG**
Mark the area where you'll be digging.
- **2 CALL 811 BEFORE YOU DIG**
Call 811 at least two working days before starting ANY digging project to get utility-owned underground lines marked.
- **3 WAIT THE REQUIRED TIME**
Wait for the site to be marked before starting any digging.
- **4 RESPECT THE MARKS**
Don't destroy the marks – they're there for your safety.
- **5 DIG CAREFULLY**
Use ONLY hand tools to expose and determine the facility's exact location when digging within 24 inches of marked lines.



Proposed Excavation

Temporary Survey Markings

Electric Power Lines

Gas, Oil and Steam

Communications

Water

Reclaimed Water

Sewer and Storm Drains

Potholing & Tolerance Zone



Safety Tips



Use vacuum equipment if possible



Hand tools



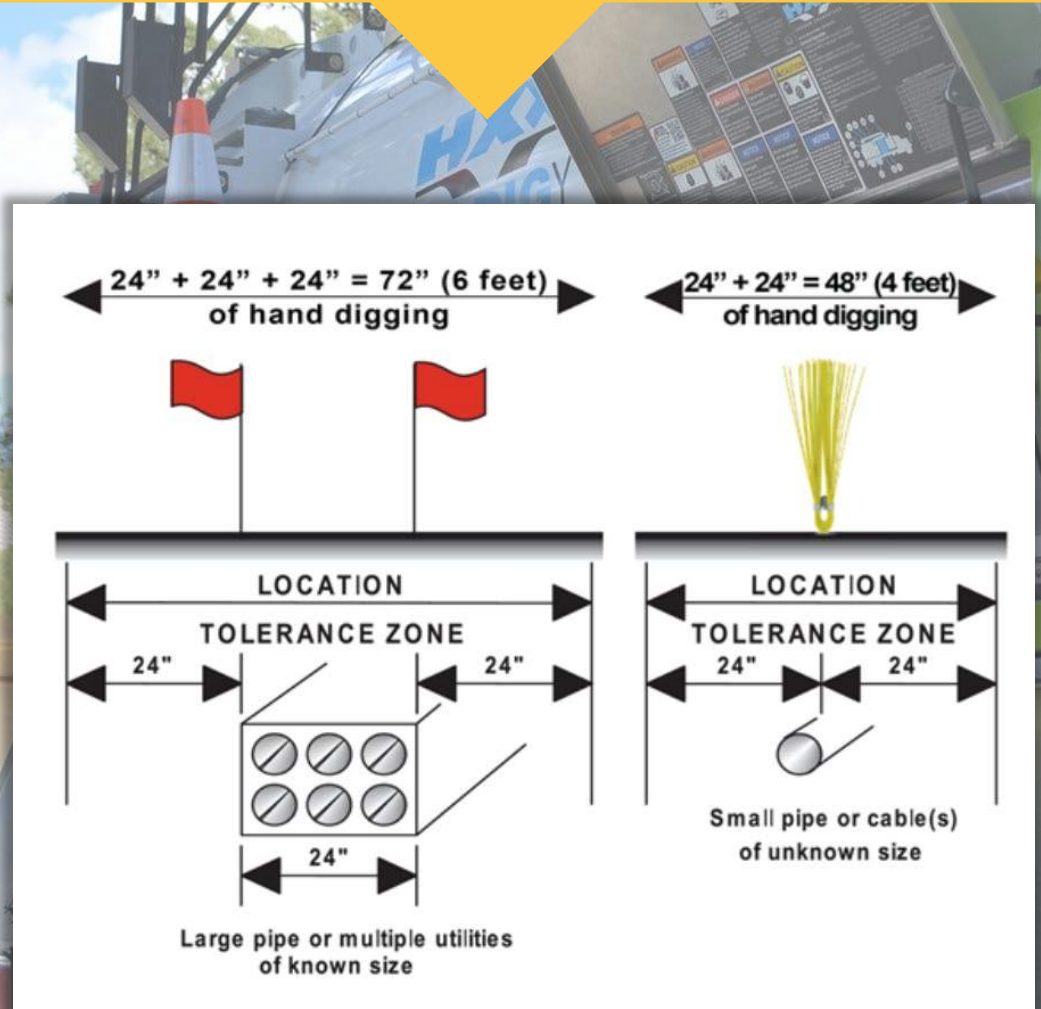
Begin 2ft to the side of marks

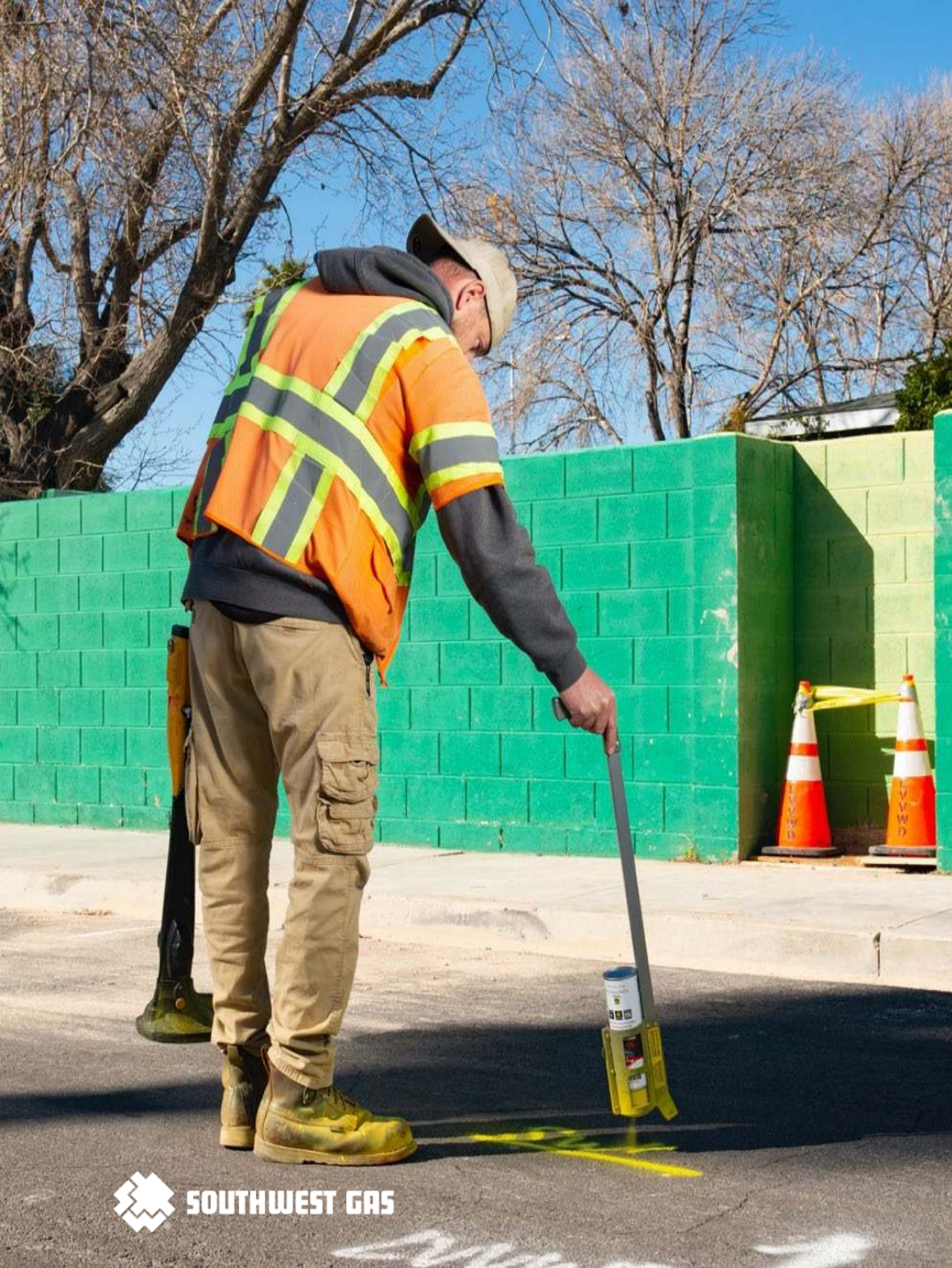


Pay attention to digging conditions



Determine the exact location





SWG Markings

N/SWG

SWG 4" Plastic D

SWG 2"
Plastic D

SWG
2 in. Plastic D

↑

15' OFF

SWG 2" Steel HP

E.O.M.

Southwest Gas Pipe

Most types of plastic pipe have a print line that indicates the pipe is used for transporting natural gas.

A print line reading **GAS USE ONLY, GAS** or **FOR GAS ONLY** is frequently found on underground gas pipe.



POLY VINYL CHLORIDE (PVC) PLASTIC PIPE



ACRYLONITRILE BUTADIENE STYRENE (ABS) PLASTIC PIPE



SLEEVING MATERIALS

Chevron Plexco Yellowpipe
1/2"-4" Pipe Diameter



Chevron Plexco Yellowstripe
1/2"-4" Pipe Diameter



Driscoplex 2406
3/4"-4" Pipe Diameter



Driscoplex 8400
1/2"-6" Pipe Diameter



Dupont Aldyl HD
1/2"-4" Pipe Diameter



Performance Pipe
Yellowstripe 8300
1"-6" Pipe Diameter



Dupont Aldyl A
1/2"-4" Pipe Diameter



Plastic Tape
3/8"-36"
Pipe Diameter



Tar Wrap Coating
3/8"-36" Pipe Diameter



POLYETHYLENE (PE) PLASTIC PIPE

POLYETHYLENE (PE) PLASTIC PIPE

POLYETHYLENE (PE) PLASTIC PIPE

STEEL PIPE PROTECTIVE COATINGS

Swanson 3306
1/2"-3/4"
Pipe Diameter



Chevron Plexco 2306
1/2"-2"
Pipe Diameter



Chevron Plexco Black
1/2"-4"
Pipe Diameter



Phillips Driscopipe
M-8000 Black
1/2"-6"
Pipe Diameter



Phillips Driscopipe
8100 Yellow
1/2"-6"
Pipe Diameter



Dura-line Polypipe®
GDB50 GAS- PE4710
1/2"-6"
Pipe Diameter



POLYETHYLENE (PE) PLASTIC PIPE

POLYETHYLENE (PE) PLASTIC PIPE

TENITE PLASTIC PIPE

STEEL PIPE PROTECTIVE COATINGS

Plastic Coating
3/8"-36" Pipe Diameter



Epoxy Coating
3/8"-36" Pipe Diameter



Work Areas

Before starting any job, look around the site to identify any natural gas facilities

- **Gas Meters**
- **Gas Valves**
- **Regulator Stations**
- **Pipeline markers**



What To Do If You Hit A Gas Line



- From a safe location Call 911 and Southwest Gas at 877-860-6020
- Remain on location until fire or SWG arrive
- Keep others from entering
- Don't smoke, use lighters or matches, or do anything that could cause a spark

What To Do If You Hit A Gas Line



- Don't move equipment or turn it on or off
- Don't repair any damage or control the flow of natural gas
- Don't extinguish a fire should ignition of escaping gas occur
- Notify SWG of any damage to pipeline, even if there is no visible sign of leaking.

New Development Trends



Damages

50%

No 811 Ticket



Work type

**Underground Electric
&
Sewer/Septic**

Highest damaging Trades



Damage Type

44%

Caused by
Backhoe/Trackhoe



Average cost of damages

\$2,199.95

In Arizona



Facility Type

82%

Services



Cost across Nation

\$425,272,756

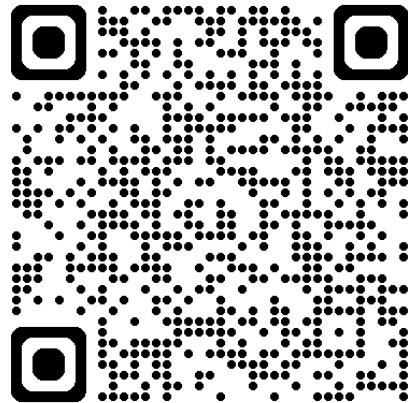
5-year average

Education Opportunities



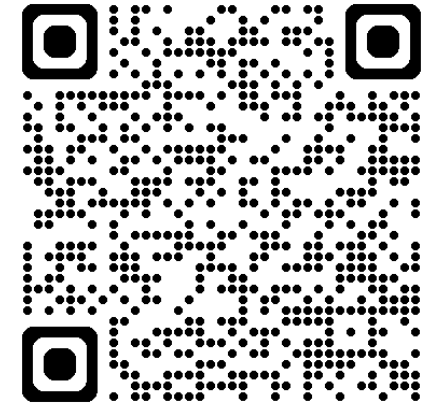
Southwest Gas Training

- Option 1 – Virtual Trainings on Microsoft Teams
- Option 2 – Onsite Trainings
- Option 3 – Hosted Training at Southwest Gas Facilities



Arizona811 Seminars

- Virtual Seminars
- In-person Seminar Tours
- Request Presentation





Thank You.

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Division Damage Prevention
Specialist

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