



Work Safely Around Natural Gas Lines

Natural Gas Basics

- Natural gas travels through pressurized underground pipelines of varying diameters. The size of a gas line is NOT a reliable indicator of the internal pressure.
- NW Natural adds a distinctive, sulfur-like odor to natural gas to assist in the detection of leaks. However, in certain conditions, you may not be able to smell this odorant.
- Leaking natural gas can be ignited by a tiny flame or spark—even from a lit cigarette or a phone.





Notify 811 Before You Dig. It's the Law!



- Dial 811 or enter an online locate request well in advance of digging or moving earth in any way. This free service will arrange to mark underground utility lines so you can dig safely.
- Before you notify 811, pre-mark your proposed excavation area with white paint, flags, and/or stakes so locators can easily identify and mark affected utilities.
- If you don't notify 811, you risk hitting an underground line. You, your coworkers, or others could be hurt or killed. You may be held liable for any resulting damages, as well as outage and repair costs.

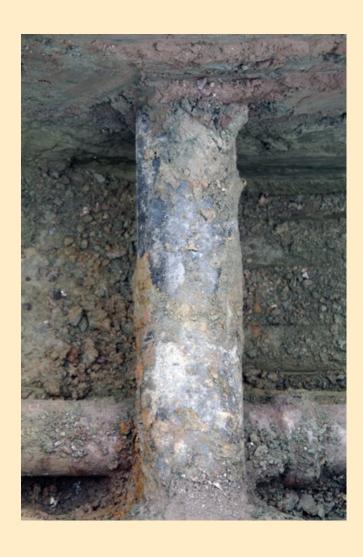
Always contact your state 811 center before digging and for the most current requirements.

Wait the Required Time

- In Oregon and Washington wait at least two full business days, for lines to be marked before you dig.
- If you wait the required time and the locate is not completed, do not dig. Notify the 811 service that your locate request has not been fulfilled.



Conduct a Visual Site Survey



- Do not rely exclusively on the locate marks. Look for visual indicators of underground facilities that have not been marked.
- Check with property owners about any private underground lines that would not have been marked by the locator.
- Also check for signs of something buried after the locate was completed, such as a fresh trench.
 - If you find a newly installed or unmarked facility, call 811.

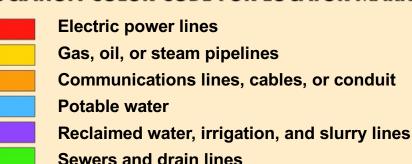
Respect the Marks, and Dig with Care

- Not all utilities are 811 members. You are responsible for notifying non-member utilities. Check with 811 for more information.
- Respect the locator marks. Maintain utility indicator marks and follow them when digging.
- Dig with care. Exercise extreme caution when digging near buried utilities, and have a spotter present to observe the excavation whenever heavy equipment is used.
- Know the underground utility color code:

AMERICAN PUBLIC WORKS ASSOCIATION COLOR CODE FOR LOCATOR MARKS







Temporary survey markings
Proposed excavation



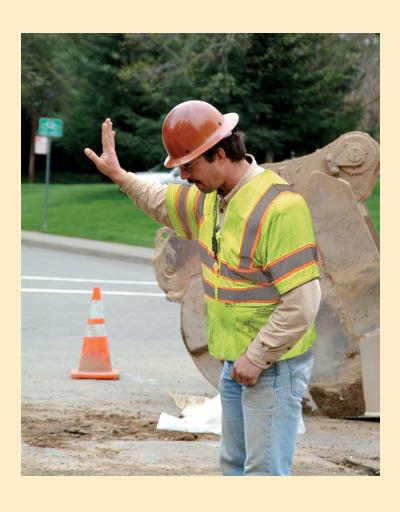
Respect the Tolerance Zone

- Adhere to state laws for digging within the "tolerance zone." This safety area spans the width of a marked utility line plus a state-mandated distance from each indicated outside edge of the line: 24 inches in Oregon and Washington.
- Hand dig prudently in this zone.
- Once visual identification has been achieved, you may use mechanized digging equipment. Use a spotter to observe the excavation and help prevent damage when heavy equipment is used near gas lines.
- The tolerance zone is a minimum safety clearance. Protect yourself by using the maximum possible distance.

Always contact your state 811 center before digging and for the most current requirements.



Know When to Stop Digging



- If there are no locate marks after you have waited the required time, do NOT dig.
- If you do not understand the locate marks, do NOT dig.
- If you cannot visually verify the location of marked utility lines by hand digging, STOP digging.
- If you find unmarked, mismarked, or seemingly abandoned facilities, STOP digging.
- If you see signs of something buried after the locate was completed, such as a fresh trench, STOP digging.
- If the marks fade or are destroyed, STOP digging, and contact 811 to request a new ticket.



Watch Out Around Pipeline Markers

- Pipeline markers indicate the need for extra care around natural gas transmission pipelines and some distribution lines.
- These markers are general indicators only. For security purposes, they do not show the exact location, path, or depth of natural gas pipelines.
- The markers should never be used as a substitute for calling 811.
- Call the number on the marker if you notice any type of suspicious activity or construction occurring nearby without gas utility personnel present.





Natural Gas Leak Detection: Look, Listen, and Smell

- NW Natural adds a distinctive, sulfur-like odor to natural gas to assist in leak detection. However, this odor may fade or be difficult to distinguish, and not all gas transmission lines are odorized.
- Don't rely on your nose alone. Use your senses of sight, hearing, and smell to detect a natural gas leak. Here are the signs:
 - The distinctive odor of natural gas
 - Dead or dying vegetation (in an otherwise moist area) over or near a pipeline
 - Continuous bubbling in water
 - A hissing, whistling, or roaring sound
 - Dirt blowing into the air from a hole in the ground
 - An exposed pipeline after an earthquake, fire, flood, or other disaster
 - A damaged connection to a gas appliance





Natural Gas Emergencies

- If you contact a natural gas pipeline or suspect a gas leak, take these steps:
 - Warn others, and leave the area immediately.
 - Do not use matches or lighters, start an engine, or operate any electrical device—even a phone. A spark could ignite leaking gas, causing a fire or explosion.
 - Do NOT attempt to stop the flow of gas or fix the pipeline. Leave the excavation open.
 - When you have reached a safe distance, report the incident:
 - Call **911** immediately if you suspect a gas leak. Federal code requires this.
 - Call **NW Natural** if you suspect a gas leak or contact a pipeline, even if damage is not apparent.
 - Stay far away from the area until safety officials say it is safe to return.
 - Report the incident to your supervisor.





Natural Gas Safety Review

- Notify 811 before you dig. It's required by law.
- Pre-mark your dig area with white paint, flags, and/or stakes.
- Wait the required amount of time.
- Conduct a visual site survey before digging.
- Respect the marks and dig with care.
- Watch out around pipeline markers.
- Know the warning signs of a natural gas leak.
- In a natural gas emergency, warn others and leave the area immediately, avoid spark hazards, and call 911 and NW Natural.



Contact Information

- In case of a natural gas emergency, call 911 and NW Natural at 800-882-3377.
- For additional information, visit the NW Natural website at nwnatural.e-smartworkers.com.







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