

Earthquakes and natural gas

No one can predict when an earthquake will occur or how much damage it will cause. In many cases natural gas pipeline systems have proven remarkably resistant to earthquake-related damage.

Recently installed natural gas pipelines are made of high-strength steel or polyethylene plastic. These materials are flexible enough to withstand significant earth movement without sustaining damage.

Properties of natural gas mean added safety for distribution system

Natural gas is lighter than air. If natural gas is released outside, it rapidly dissipates into the atmosphere instead of “pooling” on or near the ground. This reduces the chances of accidental ignition.

Natural gas is odorized for easy leak detection. Questar Gas adds a pungent odorant to its natural gas to ensure that even small leaks are easy to detect.

Natural gas has a narrow combustion range. Natural gas burns only in a mixture of 5-15 percent natural gas and 85-95 percent air. Any other mixture of natural gas with air will not ignite.

Natural gas is non toxic. Natural gas is not harmful to inhale or breathe.

If you smell natural gas ...

- Do not light a flame.
- Do not use light switches, telephones or other electrically operated devices that may spark and ignite the gas.

- Evacuate the building immediately.
- Do not start a motor or vehicle.

Call 911 or Questar’s toll-free number, 1-800-541-2824, from a nearby phone for help.

How can you be prepared?

Questar Gas recommends taking the following preparedness steps:

SECURE YOUR WATER HEATER

One of the most common types of earthquake damage is broken gas and water lines resulting from unsecured water heaters. A full water heater is very heavy and, if unsecured, can move during an earthquake. If it moves too far or falls over, it is likely to break both water and gas lines.



Emergency-preparedness experts recommend securing the water heater to the floor or wall to prevent such damage and to preserve the water it contains. Having a supply of clean drinking water is very important during an emergency, and your water heater can be a good source. To secure your water heater, you can call a contractor or do it yourself.

KNOW HOW AND WHEN TO TURN OFF YOUR NATURAL GAS METER

It may not be necessary to turn off your natural gas meter following an earthquake.

When the San Francisco Bay area was rattled by an earthquake in 1989, for example, 156,000 natural gas

customers turned off their meters. According to the local natural gas utility, this action was necessary in only about 2 percent of the cases. Since natural gas meters should be turned back on only by qualified persons, many of these customers waited extended periods — five to seven days or longer — for their gas to be restored.

You can avoid such inconvenience by knowing when to turn off your gas meter in an earthquake. This is especially important during the winter months when your furnace is running.

When should you turn off your gas at the meter?

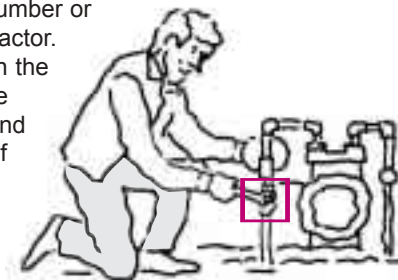
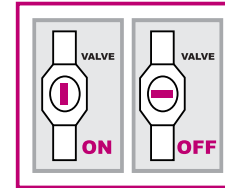
- If there is structural damage to your home.
- If you smell natural gas.
- If you hear natural gas leaking.
- If there’s a fire.

Caution: Do not shut off the gas if doing so jeopardizes your safety.

The meter shut-off valve is located next to the meter as shown. Use a wrench to turn the valve a quarter turn in either direction to the “off” position shown in the illustration. If you turn the meter off, do not attempt to turn it back on yourself.

Natural gas meters should be turned on only by a properly trained Questar Gas employee, plumber or heating contractor.

Depending on the severity of the earthquake and the number of gas meters that are



turned off, you may have to wait some time for your gas service to be restored, even if there is no damage to the gas pipelines in your area.

General earthquake preparedness and response

Most earthquake-related fatalities and injuries are caused by man-made structures and their contents rather than by the earth movement itself. Listed below are steps you can take before, during and after an earthquake to help ensure your family’s safety.

BEFORE — HOW TO PREPARE

Have on hand basic emergency supplies:

- Flashlight with spare batteries.
- Portable radio with spare batteries. (Many telephones will be out of order or tied up by emergency services, so the radio will be your best source of information.)
- First-aid kit.
- Fire extinguishers.
- Basic hand tools.
- Food. Keep a supply of nonperishable food on hand that can be rotated into your diet and replenished on a regular basis. Make sure it can sustain your family for at least 72 hours.
- Water. Store at least three gallons of water per person for a 72-hour period. Have on hand purification tablets. Be sure to read the tablet labels carefully before use.

HAVE A FAMILY EMERGENCY PLAN

Make sure all family members know where they should go for protection if your house starts to shake. Pick out safe spots in each area of the house.

(continued)

Plan where family members will go and how you will communicate with each other if an earthquake occurs when you are away from home.

- Eliminate hazards in your home that could cause damage and/or injuries.
- Secure your water heater and any other appliances that could rupture pipes if they move during an earthquake.
- Secure tall, heavy furniture — such as bookcases, china cabinets and wall units — that might fall over during an earthquake.
- Make sure there are no heavy mirrors or pictures hanging above beds.
- Relocate heavy or breakable items stored in high cabinets or on open shelves.
- Install latches that are strong enough to hold cabinet doors shut during an earthquake.
- Familiarize yourself with the location of your gas meter and the instructions in this brochure on how and when to turn off the meter. Place a wrench in a specific accessible location.

DURING — HOW TO REACT

Remain calm and reassure others. If you're indoors, stay there. Get under a desk or table or sit in a hallway, doorway or corner. Watch for falling plaster, light fixtures, bricks, high bookcases or other furniture that might slide or topple. Stay away from windows, mirrors and chimneys. If you are outside, get into the open, away from buildings, trees, walls and power lines.

AFTER — WHAT TO DO

Check yourself first, then others, for injuries. Do not attempt to move seriously injured people unless they

are in immediate danger of additional injury. Wear heavy shoes in all areas near broken glass or debris. Protect your head and face from falling debris.

- Check for fires and fire hazards.
- Check house piping and appliances for damage.
- If you smell or hear gas escaping, or if there is structural damage to your home, turn off your gas meter. (See instructions in this brochure.)
- Do not touch downed power lines or objects touching downed power lines.
- Check for hazardous chemical spills.
- Draw and store an adequate amount of water in case service is disrupted. If you suspect water-line damage, turn off water at the main valve or at the water meter.
- Turn on a battery-operated radio or car radio to receive emergency instructions and information.
- Be prepared for additional earthquake shocks called "aftershocks." They are usually weaker than the main shocks but can cause additional damage.

In case of leaks, line breaks or odors, call our 24-hour emergency phone number:

1-800-767-1689

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SAFETY

Earthquake preparedness and natural gas



This brochure contains information on natural gas safety and earthquakes. It also includes some basic steps you can take — before, during and after an earthquake — to help keep your family safe.

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