Utilities

lancaster ca
it's positively clear.

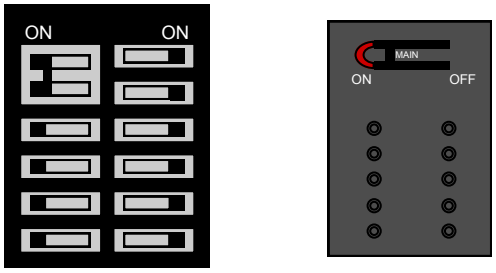
Part of the Public Safety Office's "Be Ready" series

Often times the worst damage from an earthquake is not caused by the shaking itself, but from gas leaks, broken water pipes, and damaged electrical systems causing problems after the fact. Fires and floods are the two most common indirect effects of disasters that not only can destroy an otherwise okay home, but can be prevented in most cases.

When an earthquake or other disaster strikes, check on yourself and your family first. Then, the very next thing you should do is check your utilities.

Electricity

Before a disaster, know where your home's breaker panel or fuse box is. In apartments, these are commonly located in a hallway; in houses, they can be anywhere but are usually located inside the garage or on the side of the house, near the electrical meter.



Examples of a circuit breaker panel (left) and a fuse box (right).

After a disaster strikes, go to your breaker box or fuse panel and turn off your electricity. If any wiring was damaged during the disaster, shorts and broken wires (causing other circuits to overload) can start a fire. In addition, your electrical system might be fine, but a spark from a light switch or cell phone can ignite a gas leak.

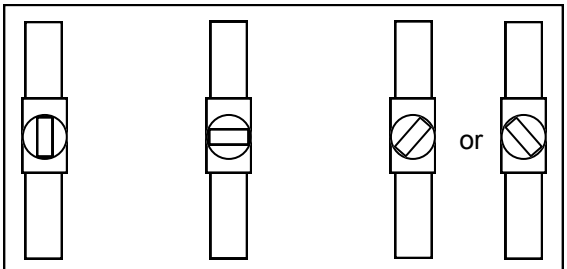
Circuit breakers:
Turn off all the individual circuits first, and then lastly the main breaker. The main breaker is usually the largest one in the panel. To turn your power back on later, turn on the main breaker first, and then the individual circuits. For apartments, check with your manager—sometimes the main breaker is in a separate location outside of the unit.

Fuse boxes:
Fuse boxes are relatively rare these days, but some older homes may still have them. To shut off the power, simply turn off the main switch at your fuse box. This switch may be a lever, or it may be a cartridge fuse that needs to be completely pulled out. When turning the power back on, first check all the individual fuses, and replace any blown ones if necessary before replacing the main fuse or flipping the switch.

You may turn the power to your home back on after you have verified that there are no other problems, such as gas leaks or flooding; however remember that utilities may have been affected by the disaster, so don't be surprised if you still don't have power.

Gas

Once you've turned your power off, you need to check for gas leaks. Know where your gas shut-off valve is ahead of time, and test it to make sure it will work in an emergency. To locate the valve, look for the pipe that comes out of the ground and feeds into the meter. For apartment buildings, ask



Gas shut-off valve in the open (left), off (middle), and test (right) positions.

your manager where the meters are to locate the valve.

To test, use a crescent wrench or utility wrench (with a specially shaped hole for gas valves), and turn the valve ONLY until it is diagonal to the pipe. If your shut-off valve does not easily turn or is stuck, contact the gas company to have it repaired or replaced. Do not use WD-40 or any other lubricant on the valve, as this may corrode the O-rings inside that allow it to turn. Make sure to turn the valve back to "open" after testing.

Immediately after a disaster, go through your home, starting at the water heater. Sniff for the distinctive odor (added by the gas company for this purpose), and listen for any hissing, whistling, or roaring sounds, which may be indicative of a leak. If you do hear or smell gas, immediately get everyone out of the home, shut off the valve by turning it completely perpendicular to the pipe, and open up the windows.

If you don't hear or smell any signs of a gas leak, check the meter. Rapidly spinning dials may also be indicative of an as-yet-undetectable leak, such as in a wall where it can quickly build up to dangerously explosive levels.

ONLY shut off your gas if you smell or hear signs of a leak, or see rapidly spinning dials on the meter. NEVER turn the gas back on once you've shut it off, as this can only be safely done by a gas company technician who will check for any leaks and re-light all the pilots.

Water

Determine the location of your water shut-off valve. This is the valve that shuts off water at the house, *not* at the street. The water shut-off valve at the street (in the concrete meter box) requires a special tool to turn, and is not necessary to use if you know where your home shut-off valve is.

You valve may be in any one of a number of places, but is generally in the garage, in a closet or laundry room, or near the water heater. If you're not sure, contact your water supplier (or apartment manager) to have a technician come out and help you find it. Once you've located the valve, clearly mark it with a tag or other visible identifier, and

Example of a home water shut-off valve. Turn clockwise to shut the water off, and counter-clockwise to turn it back on.

test it to make sure that it turns easily.

In the event of a disaster, turn off the water to your house. There are two reasons for this. When there is a lack of pressure from the main water system that supplies your home (whether from broken mains, unpowered pumps, etc.), gravity can drain the water already in your pipes, water heater, and toilet tanks out. Closing the valve keeps this water in your home, making it available for your use. In addition, shutting off the water prevents contaminants, such as from damaged sewer lines or storm drains, from entering your home's water supply and making it unusable (even with bleach).

Don't open up the water valve again until local authorities have determined and announced that the water system is safe, which may take several days or even weeks, depending on the area in which you live.

Propane

Much like for gas leaks, shutting off your propane should only be done under certain circumstances, as it should only be turned back on by a qualified technician. Only turn off propane if you can hear a leak or smell an odor of rotting eggs, or if your tank's electrical components (if applicable) have been exposed to water. The valve is located on the tank, and operates exactly like a water shut-off valve.

For more information, visit the following websites:

Southern California Edison: http://www.sce.com

Southern California Gas Company: http://www.socalgas.com

Propane Safety: http://www.suburbanpropane.com/safety.html