

# Earthquake preparedness: Steps to strengthen resilience



## Earthquake preparedness: Steps to strengthen resilience

We can't predict earthquakes, but we can prepare for them

Earthquakes aren't just a Pacific Coast problem. Although Alaska, California, Hawaii and Washington are particularly vulnerable, every state has the potential to experience damaging earthquakes. <sup>1</sup>

Unlike storm systems, earthquakes don't bother to announce they're coming. That element of surprise makes ongoing earthquake preparedness even more essential.

For a business owner or risk manager, investing in strong buildings, as well as stabilizing non-structural elements within a building, can reduce the risk of damage from not only an earthquake but also a tornado, hurricane or other natural disaster.

Following are some steps to consider taking before the next earthquake occurs.

TIP: Consider an earthquake drill. Many people around the world participate in International ShakeOut Day in October; www.shakeout.org offers other drills throughout the year.

#### **PREPARE**

Although scientists have never accurately predicted a major earthquake,<sup>2</sup> you can still prepare. The adage "Earthquakes don't kill people, buildings do" suggests that there's room for improvement.

#### **Structural elements**

Have a qualified structural engineer evaluate your property, particularly if it predates seismic design provisions in local building codes.

- If your building is older, consider retrofits to meet or exceed current building codes.
- Unreinforced masonry is especially vulnerable in an earthquake.

#### **Non-structural elements**

Brace heavy machinery, containers, tanks, stock and appliances that could shift, fall, hurtle or rupture during an earthquake. Anchor file cabinets, mirrors or pictures to wall studs. Lock the rollers of large pieces of furniture. Attach computers and towers to desks. Secure ceiling lights and false ceilings to joists.

- Qualified personnel can install a main gas shut-off device and flexible connections on gas appliances. Discuss and post directives for staff on how and when to shut off gas, electricity and water. Keep any necessary tools, such as wrenches, close by.
- If you're in an earthquake zone, consider applying safety film to windows and glass doors, especially where breakage could cause the most injuries or damage.

#### **Emergency readiness**

Form an emergency response team of staff who are responsible for fire safety equipment checks, evacuation procedures, first-aid training, drills, and internal and external communication in the event of an earthquake.

- Fire is the most common hazard after an earthquake. Regularly check the integrity of fire extinguishers, pumps and water tanks.
- If you don't already have a disaster preparedness kit, assemble one. Consider including a whistle, a dust mask, a portable charger for cell phones, a battery-powered or hand crank radio, and a NOAA Weather Radio with tone alert.

#### **SURVIVE**

Take a few minutes to educate your staff on how to protect themselves in a quake. Let them know that smoke alarms and sprinkler systems often go off in buildings during an earthquake, even if there is no fire. Coach them on a mantra, such as "Duck, cover and hold," if they feel the earth start to tremble. Other tips include the following:

- Inside a building: Move away from windows and doors. Drop to the floor, take cover under a sturdy table or desk against an inside wall. Grasp one of its legs while covering your head with your other arm.
- Outside a building: If possible, move into a clearing and away from power lines, trees and buildings. Drop to the ground and wait for the shaking to stop. If you are near unstable slopes or cliffs, be alert for falling rocks and the possibility of landslides.
- Driving: Pull to the side of the road away from traffic, road signs and power lines, if possible. Avoid stopping on or under bridges. Stay in your car with your seat belt fastened until the shaking stops. If you resume driving, be aware of possible damage to the road.

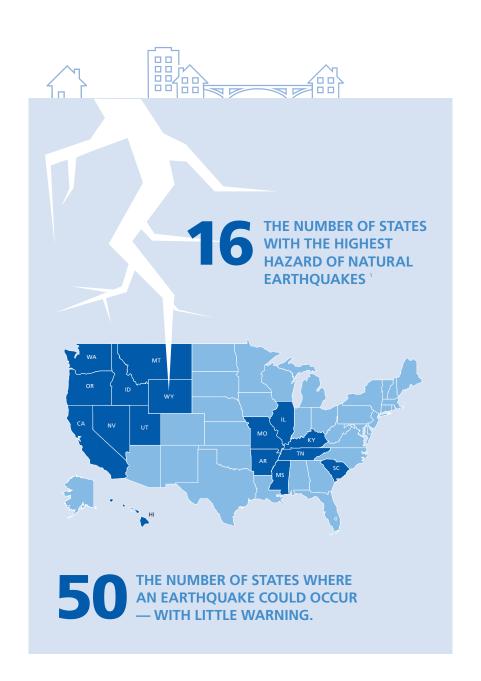
TIP: Don't let your guard down too soon; aftershocks, landslides and tsunamis (if you live in a coastal area) can follow the initial shaking.

### **RECOVER**

Business continuity planning should spell out procedures to organize your recovery in a confusing period. The plan should address business interruption risks and the possibility that fire protection systems may be damaged in the event. The plan also should encompass the following:

- Guidelines for taking an inventory of damage.
- Warnings against hot work until you know that fire protection is fully functional.
- Priorities for repairs.
- Contact procedures for suppliers to find out availability of supplies after an event.
- Communication procedures with customers to inform them of any delays or reductions in your capabilities.
- Easy access to up-to-date contracts with external contractors critical for repairs and resumption of operations.

TIP: Social media can be a useful business continuity tool after an earthquake. For more tips, download FEMA's QuakeSmart Ready Business Toolkit from www.fema.org



## For more information on severe weather, go to: zurichna.com/SevereWeather

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