

# Earthquake Clean-up: Addressing Hazards After Disaster

Clean up after earthquakes and other natural disasters unfortunately comes with a whole new set of worksites hazards unique to the situation. If you have a company located within the damaged areas from an earthquake, please consider the list below and the informational links provided at the end. We will discuss ways to prepare for the complicated task of cleaning up after an earthquake disaster in order to minimize the safety risks and recover your facilities as quickly as possible.

The best initial advice is to allow a clean-up contractor and civil authorities to handle the clean-up and rescue operations. Only enter the site when it is deemed safe by the authority in charge.

## Common Hazards post-Earthquake

- **Site Management:** Civil authority and emergency responders will either have a command structure or will be working to establish one. Be sure to communicate with that structure as soon as possible. They can help you maintain order and minimize hazards. You and your employees should not enter an area until it is cleared by this authority structure.
- **Structural instability and secondary collapse potential:** Entering damaged buildings is dangerous and should only be done by trained rescue personnel. Falling objects and further collapse are always possible. Roadways and bridges will also likely be damaged and may be unsafe.
- **Utilities:** Gas lines and electrical lines may be damaged but still active. Explosion, asphyxiation, and electrocution are all real hazards post-earthquake. The utility provider should approve clearance prior to entering a site. If a downed electrical line is spotted, assume it is live and stay at least 10 feet away from it.
- **Chemicals:** Chemicals will likely be leaking in some places. Stay well away from any contaminated areas.
- **Flooding:** Flooding can come from damaged water supply lines, damaged dams, and post-earthquake tsunamis. Be aware of this danger and avoid entering flooded areas.
- **Tsunami:** If you live on the coast or near a large lake, there is risk of tsunami. Many local municipalities along the coasts have tsunami plans in place. Be sure to coordinate your tsunami plans with the community around you and get to know the warning signs, such as quickly receding water. Remember that the first wave of a tsunami is never the largest. Be sure to head for high ground at the first warning of a tsunami and stay on high ground until government officials declare the emergency is over.
- **Fire:** This can occur based on gas leaks, damaged fire suppression systems, and ignition sources that would not normally exist. Secondary explosions can occur because of leaking gas lines or other fuel sources. Be aware of this danger and stay clear of open flames.
- **Water contamination:** Most water sources will be contaminated. You will need to take bottled and other safe water sources into the area for use for quite some time after an earthquake.

- **Food:** Refrigeration will likely be an issue. The areas affected will need supplementary food supplies.
- **Carbon Monoxide:** Alternate sources of electrical supply, heat, and cooking will produce carbon monoxide. This must be considered and controlled with sufficient ventilation. None of these devices should be used in enclosed spaces.
- **Confined Spaces:** Building collapse and equipment damage can create confined spaces which did not exist before. Only rescue personnel who are trained in sufficient confined-spaces entry processes should work in these areas.
- **Air Contaminants:** Asbestos, silica, smoke, mold, and other contaminants will likely occupy the air following building collapse. Exposure to these contaminants without protection can have long-term effects.
- **Traumatic Events:** Ensure you distribute Employee Assistance Program (EAP) information to employees affected. This type of event can be stressful, especially where there is loss of life or injury. Be proactive with your resources.
- **Sharp and protruding materials** will be present anywhere damage has occurred.
- **Uneven surfaces** and other trip-and fall-exposures will be present.
- **Civil unrest, looting, and other criminal activity** may increase for a period of time.
- **Heavy Equipment:** There will be hazards from construction and other heavy equipment in damaged areas, possibly even after they are cleared by the authority in charge.

## Supplies

The best advice is not to enter areas affected by the earthquake and not yet cleared by civil authorities. Even after the space is cleared you should determine what is necessary for employees entering the areas. Depending on your assessment, any of the following may be needed. Remember that most personal protective equipment—PPE—comes with the requirement for training and safety programming.

- PPE
  - › Hard hat
  - › Gloves (different types for different exposures)
  - › Safety glasses
  - › Reflective vest
  - › Steel toed work boots
  - › Respirator
  - › Fall protection
  - › Hearing protection
- Sanitation supplies
  - › Water
  - › Soap
  - › Hand sanitizer

- › Toilet paper
- › Temporary bathrooms if needed
- › Shower facilities
- Drinking water and food
- Extra fuel
- Supplemental lighting such as battery-powered lights

This list is not exhaustive. We would encourage a thorough assessment process to determine whether other supplies are needed or whether other hazards are present.

<https://www.cdc.gov/disasters/alldisasters.html>

<https://www.osha.gov/SLTC/emergencypreparedness/guides/earthquakes.html>

<https://www.cdc.gov/disasters/earthquakes/>

<https://www.cdc.gov/niosh/topics/emres/sitemgt.html>

<https://www.fema.gov/earthquake>

<https://www.weather.gov/tsunamiready/communities>

<https://www.weather.gov/tsunamiready/become>

If you have questions, please do not hesitate to contact your Woodruff Sawyer Account Executive.