

# Tornado Safety

A tornado is a violently rotating column of air extending from a thunderstorm to the ground, visible due to water, dust, and debris. They're considered one of nature's most violent atmospheric storms, capable of intense winds over 200 mph that can level buildings, upend trees, flip vehicles, and create a swirl of dangerous flying debris.

The typical damage path of a tornado is one to two miles long and around 50 yards wide. Some tornadoes can be more than a mile wide. The size of a tornado is not always an indication of its intensity. Tornadoes are usually on the ground for 5-10 minutes—some are stationary, while others move faster than 60 mph. Over 1,000 tornadoes touch ground each year in the U.S., resulting in 80 deaths and 1,500 injuries.



## Where and when do tornadoes occur?

Tornadoes are most common in the U.S., where they can happen anywhere, but most often in the central Plains, east of the Rocky Mountains and west of the Appalachian Mountains. They occur mainly in the spring and summer, in the late afternoon and early evening.

Tornadoes have been reported in all 50 states. A U.S. National Oceanic and Atmospheric Administration (NOAA) study of historical weather data found that Texas and Kansas average the most tornadoes each year. In terms of frequency, most tornadoes occur in April, May, and June.

A region in the Plains between central Texas and South Dakota is referred to as “tornado alley” due to a high frequency of tornadoes. NOAA states that the idea of a “tornado alley” can be misleading since the

U.S. tornado threat “shifts from the Southeast in the cooler months of the year, toward the southern and central Plains in May and June, and the northern Plains and Midwest during early summer.”

## Preparing for a tornado

Be aware of your region’s tornado risk and build emergency response actions into your organization’s business continuity plan. Identify vital operations, points of contact (e.g., federal and non-profit disaster relief organizations, utility companies, and emergency responders), and staff roles and responsibilities in case of a tornado. If you don’t have a business continuity plan, you can [create one using our custom tool](#) (please note, you must have an HAI Group member login to access this tool).

- As part of planning efforts, identify a storm shelter and practice regular tornado drills.
- Consider building a safe room or storm shelter [designed to Federal Emergency Management Agency standards](#). The next best protection during a tornado is a small, interior, windowless room or basement on the lowest level of a sturdy building. Ensure staff and residents know where to find shelter during a tornado.
- [Create a disaster preparedness kit](#) with emergency items such as medical supplies, perishable foods, drinking water, flashlights, batteries, cell phone chargers, and a battery-powered radio. Urge residents to create a kit of their own.
- Remove any damaged tree limbs on your property.
- Ensure all outdoor items on the property are secure or brought indoors to prevent dangerous flying debris.
- NOAA meteorologists monitor weather across the country, look for favorable conditions for tornadoes to occur, and issue tornado watches or warnings if necessary.
  - **Tornado Watch:** Advises individuals to watch and prepare for severe weather and stay tuned to weather broadcasts if warnings are issued. Tornado watches can cover parts of one state or several states.
  - **Tornado Warning:** Issued when a tornado is reported by spotters or indicated by radar. A warning advises individuals about a serious threat to life and property to those in the tornado’s path. Tornado warnings can cover parts of counties or several counties that are in danger.



- Pay attention to weather reports. Aside from trusted local news and social media accounts, alerts are available via:
  - [Wireless Emergency Alerts \(WEAs\)](#) from public safety officials. These alerts will appear as text messages.
  - [NOAA Weather Radio \(NWR\)](#), a nationwide network of radio stations that broadcast continuous weather information from the nearest National Weather Service office based on your location. NWR broadcasts official warnings, watches, and forecasts.

## During a tornado

Don't wait until you see a tornado to respond. Immediately seek shelter once authorities issue a tornado warning.

### If you're inside a building:

- Seek shelter in the lowest level of the building, preferably a basement or storm cellar. If neither is available, go to a windowless interior room on the lowest level.
- Stay away from windows. Cover your head, neck, and eyes to protect against flying debris and broken glass.
- Don't use elevators, which can become stuck during a power outage.
- Remain sheltered inside until you're sure the storm has passed.



### If you're outside:

- Get inside a building as quickly as possible and find a protected space with no windows on the lowest level.
- If indoor shelter is unavailable, crouch for protection next to a strong structure, or lie flat in a ditch or low-lying area. Cover your head, neck, and eyes with your arms or clothing.

## If you're in a vehicle:

- Seek indoor shelter if possible.
- Don't try to outrun a tornado with your vehicle. Find outside shelter such as a strong structure or ditch if possible.
- If necessary, pull over and stay in the vehicle with your seat belt fastened. Put your head below the windows and cover your head, neck, and eyes.

## After a tornado

Conditions can remain dangerous even after a storm passes. Tornado damage can cause gas leaks, down power lines, and structural damage to buildings that can pose risks to residents and staff.

- Continue to monitor local news and radio broadcasts and social media for updates from authorities.
- Watch out for fallen power lines and report them to the utility company.
- Stay out of damaged buildings until authorities deem it's safe to return.
- If power is lost, use battery-powered lights instead of candles, as open flames can ignite leaking gas. If you smell gas or hear a blowing noise, leave the building immediately and call the gas company or fire department.
- Clean up spilled bleach, gasoline, or other flammable liquids that could become a fire hazard.
- When it's safe to do so, document any damage to your property with photographs to assist in filing an insurance claim.



## Interested in working with HAI Group to manage your agency's risk?

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