

Risk Management Strategies



Brought to you by PHCC National's Risk Management/
Safety Committee

This publication is intended to provide general recommendations regarding risk prevention. It is not intended to include all steps or processes necessary to adequately protect you, your business, or your customers. You should always consult your personal attorney and insurance advisor for advice unique to you and your business.

Risks Posed by Tornadoes

Tornadoes pose a high risk because the low atmospheric pressure, combined with high wind velocity, can:

- Rip trees apart
- Destroy buildings
- Uproot structures and objects
- Send debris and glass flying
- Overturn cars and mobile homes

While tornadoes have been reported in every state, they are most prevalent east of the Colorado-Wyoming-New Mexico area. Most frequently, tornadoes are found in the area from Kansas to Kentucky, the Great Plains, and the Upper Midwest. "Tornado Alley" includes Texas, Oklahoma, and Kansas. More than 1,000 tornadoes are reported yearly.

Tornado season lasts from March to August, but can occur year-round. More than 80 percent of tornadoes occur between noon and midnight, and one quarter occur from 4:00 p.m. to 6:00 p.m. Tornadoes are most likely to occur between 3:00 p.m. and 9:00 p.m.

Nine thousand deaths have been attributed to tornadoes in the past 50 years. Each year, about 100 people are killed. Annual damage from tornadoes can run into the hundreds of millions of dollars. The population in the ten tornado-prone states is increasing because of rapid urban development, which increases the likelihood of injuries and deaths.

Tornado strength is measured on the Enhanced F- Scale, which correlates damage with wind speed. There are six wind-damage levels on the scale:

Operational EF Scale	
EF Number	3 Second Gust (mph)
0	65-85
1	86-110
2	111-135
3	136-165
4	166-200
5	Over 200

Although the Midwest and sections of the Southeast have the highest risk of tornadoes, with the help of sophisticated radar and other measures, meteorologists are now able to predict when conditions favorable for tornado formation exist and are better able to warn the public. Many tornadoes (usually F0 and F1) are still unreported or unconfirmed.



How can you prepare for a tornado?

Tornado Preparedness

Know the risk for tornadoes in the area. Although tornadoes have been reported throughout the United States, some areas are clearly at higher risk than others.

Identify a “safe” room where others can gather during a tornado. In a home, the safest place to be is in the basement, away from all windows. If the home has no basement, the safest place is an interior hallway or room on the lowest floor. In a high-rise building, the safest place is in a hallway in the center of the building. Mobile homes are not generally safe during a tornado. Those in a mobile home should seek shelter in a nearby sturdy building. Consider having the designated safe room reinforced, if possible, for additional protection from tornadoes.

Find out your community’s tornado warning system. Broad areas use an Emergency Alert System (EAS) to warn of imminent hazards. But within these areas, communities may have other warning systems for tornadoes, including sirens that are also used to signal fires and other hazards. For those in communities that use sirens, it is critical to learn the siren warning tone to ensure recognition. Also, when severe weather threatens, the National Oceanic Atmospheric Administration (NOAA) weather radio carries current information and instructions provided by the National Weather Service.

Conduct periodic emergency drills. A drill helps to ensure that everyone knows what to do and where to go during a tornado emergency. All employees should understand how they should respond to a tornado, or any other workplace emergency.

Tornado Recognition

The “obvious” is not always as obvious as we think. Tornadoes may appear nearly transparent until they pick up dust and debris. Tornadoes can be wrapped in heavy rain, which may limit visibility—but, because tornadoes are associated with powerful updrafts, rain does not always fall in or near tornadoes.

The most obvious clues that a tornado may be forming or has formed are high winds and very large hail. Be alert for these clues and take protective action, even if no tornado warning is issued. If weather forecasts include a potential for severe weather, monitor a local AM/FM radio station.

A severe weather **watch** means weather conditions are favorable for the formation of tornadoes or other types of severe weather.

A severe weather **warning** means a tornado or other severe weather has been sighted nearby and people should take shelter immediately.

Tornado Clues

- **High winds**
- **Very large hail**

What should you do when you see a tornado or receive a tornado warning?

During a Tornado...

- Damage often occurs when wind gets inside a building. Keep all windows and doors closed. Buildings do not explode because of air pressure differences.
- Go to the designated “safe” room or area. Stay away from windows to avoid flying debris and glass. Get under a stable structure to shield against flying debris.
- Listen to EAS or NOAA Weather Radio for current emergency information and instructions.
- If you are driving and see a tornado, go to a nearby sturdy building and seek an area on the lowest level, without windows. If there are no buildings nearby, get out and away from the vehicle and lie down in a low spot on the ground. Protect the head and neck.

Following a Tornado...

Following a tornado, you should continue listening to EAS or NOAA weather radio for updated information and instructions. As with many other hazards, post-tornado actions include:

- Avoiding fallen power lines or broken utility lines and immediately reporting those you see,
- Staying out of damaged areas until told that it is safe to enter,
- Staying out of damaged buildings,
- Using a flashlight to look for damage and fire hazards, and documenting damage for insurance purposes,
- Turning off utilities, if necessary, and
- Reserving the telephone for emergencies.

The information in this publication is intended to provide general information and recommendations for risk prevention. It should not be considered legal advice regarding your unique needs. Qualified counsel should be sought regarding questions to your circumstances.

Tomado Myths and Facts

Myth: Areas near lakes, rivers, and mountains are safe from tomadoes.

Fact: No place is safe from tomadoes. A tomado near Yellowstone National Park left a path of destruction up and down a 10,000-foot mountain.

Myth: The low pressure with a tomado causes buildings to explode as the tomado passes overhead.

Fact: Violent winds and debris slamming into buildings cause most structural damage.

Myth: Windows should be opened before a tomado approaches to equalize pressure and minimize damage.

Fact: Windows should be left closed to minimize damage from flying debris and to keep the high winds out of the structure.

Myth: If you are driving and see a tomado, you should drive at a right angle to the storm.

Fact: The best thing to do is seek the best available shelter. Many people are injured or killed by remaining in the ir vehicles.

Myth: People caught in the open should seek shelter under highway overpasses.

Fact: Do not seek shelter under highway overpasses or under bridges. If possible, take shelter in a sturdy, reinforced building.