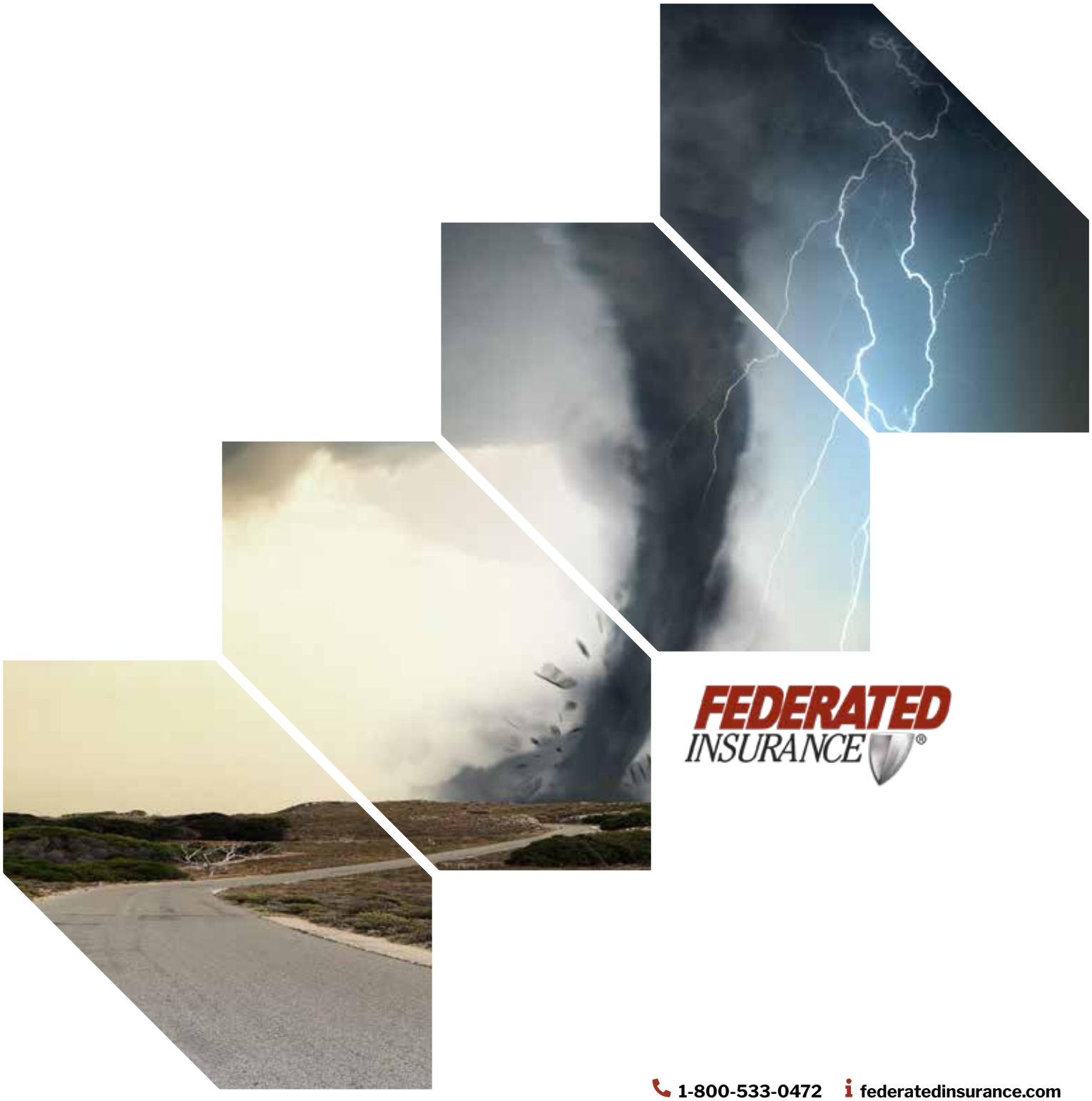
TORNADO PREPAREDNESS



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A tornado is a powerful, circular windstorm that may be accompanied by winds in excess of 250 miles per hour. Tornadoes can develop during severe thunderstorms and may range in width from several hundred yards to more than a mile across.

Risks Posed by Tornadoes*

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

- Uproot trees
- Destroy buildings and objects
- Send debris flying
- Overturn vehicles 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 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. Tornadoes are most likely to occur between 3:00 and 9:00 p.m., with 25 percent of them occurring between 4:00 and 6:00 p.m.

Nine thousand deaths have been attributed to tornadoes in the past 50 years. Each year about 180 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 rated on the Enhanced Fujita (EF) Scale, which correlates degree of damage with an estimated wind speed. There are six wind-damage levels on the scale:

Tornado Myths and Facts

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

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

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

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

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

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

Myth: If you are driving and see a tornado, 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 their vehicles.

Enhanced Fujita Wind-Damage Scale

Wind-Damage Level	Wind Speed (mph)	Anticipated Damage
EF-0	65–85 mph	Light
EF-1	86–110 mph	Moderate
EF-2	111–135 mph	Considerable
EF-3	136–165 mph	Severe
EF-4	166–200 mph	Devastating
EF-5	Over 200 mph	Incredible

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 EF-0 and EF-1) are still unreported or unconfirmed.

**FEMA, Community Emergency Response Team Basic Training Instructor Guide Hazard Annex – Tornadoes (October 2015) https://www.fema.gov/media-library-data/1446047949483-5dad68274b1ac268fcd261529d28ac7a/Section_8_Tornado.pdf*

Tornado Preparedness

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

Identify a "safe" room where people 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. Within these areas, though, 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 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.

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 your head and neck.

After a Tornado

After a tornado, you should continue listening to EAS or NOAA weather radio for updated information and instructions. In addition, as with many other hazards:

- Arrange for the first-aid treatment of any one who is injured.
- Stay out of damaged areas until told that it is safe to enter.
- Stay out of damaged buildings.
- Use a flashlight to look for damage and fire hazards.
- Turn off utilities, if necessary.
- Reserve the telephone for emergencies.
- Avoid fallen power lines or broken utility lines and immediately report those you see.

Recovery

- Protect property from further damage or theft.
- Report damage to your insurer as soon as possible.
- Inventory losses and photograph damage.
- Check contractor's references and obtain certificates of liability and workers compensation before signing contracts.
- Save receipts for temporary repairs made.
- Keep detailed records for extra expenses during the interruption.
- Prepare records showing business income before and after the loss.

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