

This preparedness guide explains tornadoes, their associated hazards, and steps that you can take to protect yourself, your family, your home, and your business.

What is a Tornado?

A tornado is a violently rotating column of air that extends from the base of a thunderstorm cloud to the ground. Although research continues into how tornadoes develop, what is known is that tornadoes form when rapidly rising air inside of a thunderstorm changes direction and speed with increasing height, resulting in increased rotation within the storm. It is within this area of strong rotation that tornadoes tend to develop. Tornadoes have winds ranging from 65mph to over 200mph. Such winds can easily inflict serious property damage as well as deaths and injuries from flying debris and fallen trees.

Tornadoes are widely known to develop within severe thunderstorms associated with cold and warm fronts; however, tornadoes can also form within the outer rain bands of hurricanes. These tornadoes tend to be smaller and short-lived, making them very difficult to detect, but they can still cause serious damage in addition to the hurricane itself.

Tornadoes that form over a body of water are called waterspouts. Waterspouts are generally weaker than their land-based counterpart, but they can cause major damage to ships and vessels. Waterspouts that move over land are classified as tornadoes. If a circulating cloud is not touching the ground, it is called a funnel cloud.

Just because you may have heard a loud roar during a damaging storm does not necessarily mean it was a tornado. Any intense thunderstorm wind can produce damage and cause a roar.

You can find out more about tornadoes from the Storm Prediction Center's website:

www.spc.noaa.gov/faq/tornado

The Enhanced Fujita (EF) Scale

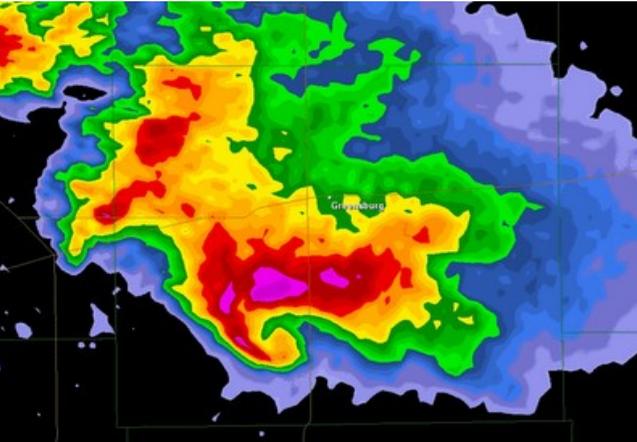
The National Weather Service uses the EF-Scale to assign a tornado a "rating" based on estimated wind speeds and related damage.

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

Tornado Watch vs. Tornado Warning

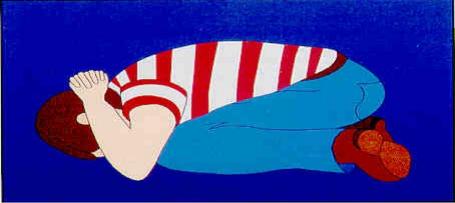
A Tornado Watch is issued whenever conditions are favorable for the development of tornadoes. If a Tornado Watch is issued for your area, continue routine activities, but keep a close eye on the weather by tuning into your local TV or radio station, NOAA Weather Radio, or internet. Be prepared to take shelter quickly in the event a Tornado Warning is issued.

A Tornado Warning means that a tornado has been sighted by a trained weather spotter, or one is being indicated on Doppler weather radar. If a Tornado Warning is issued for your area, **take cover immediately.**



What to do if a tornado threatens?

- If you are in a mobile home or automobile, get out! Seek shelter in a sturdier building.
- If you are in a house without a basement, go to an interior, windowless room such as a closet or bathroom. Crouch as low as possible to the ground a cover your head and body with pillows, a mattress, or clothing to protect you from falling debris.
- If you are at school, follow your teacher's or principal's instructions. Go to an interior hallway in an orderly fashion. Crouch down, and cover the back of your head. Abandon all portable classrooms and gymnasiums.



- If you are work, church, a store, or some other facility, go to an interior bathroom, hallway or stairwell and cover your head with your arms. Avoid windows. Stay off elevators.
- If you are outdoors and can't find a sturdy shelter, lie face down on the ground and cover your head with your arms. Get as far away from trees and vehicles as possible.
- Above all, **DON'T PANIC!!!!**

Tornadoes in Florida

Florida has its fair share of tornadic activity, ranking *third* in the nation with an average of 55 tornadoes per year. The peak of tornado activity in Florida is from January through April as strong late winter cold fronts move through the Southeast U.S. A smaller, secondary peak occurs in October and November due to late fall season cold fronts. Tornado outbreaks can and do occur in Florida. A tornado outbreak in 1998 killed 42 people in Central Florida while another outbreak in 2007 killed 21 people in Lake and Volusia counties. Florida's tornado history shows us that strong to violent tornadoes are just as likely to occur after midnight as they are in the afternoon. This unique feature makes these tornadoes more dangerous, because most people are asleep after midnight and cannot receive weather warnings relayed by commercial radio or television stations.



Tornado Safety FAQ

- **Question:** Am I safe inside of a mobile home?
Answer: No. Even a tied-down mobile home can be destroyed by a tornado's winds. Seek shelter in a stronger structure.
- **Question:** Should I open the windows as a tornado approaches to equalize the pressure?
Answer: Absolutely not! Winds blowing against a structure causes tornado damage, not pressure differences. Stay away from all windows during a tornado.
- **Question:** Can I seek shelter from a tornado under a bridge or overpass?
Answer: Although overpasses are better shelter than cars, they are not recommended. Winds may actually be stronger under an overpass because of the air moving through a more confined space.
- **Question:** Can I outrun a tornado in my car?
Answer: No. Tornadoes can move at speeds in excess of 60 mph, and they don't have to follow roads as cars do. Never try to outrun a tornado!



What to do after a tornado strikes?

- Call 911 for assistance with any injuries.
- Avoid all downed power lines. They may still be carrying an electric current.
- Watch your step! Nails, broken glass and other sharp debris can cause serious injury.
- Do not use open flames such as lighters or matches. Leaking gas lines or fuel may ignite.
- Listen for information and/or instructions from local authorities.
- If you are outside of a tornado-impacted location, **do not** venture into a disaster area to sightsee.



Are you Prepared?

Tornadoes, along with any other disaster, can occur at any time. You or your family could be anywhere—at home, school, or work. You may be together or separated. How would you find each other? What would you do if basic services were cut off, such as telephone and electricity. The Florida Division of Emergency Management encourages everyone to have a personal disaster plan. Find out how to create your own family or business disaster plan at:

www.FloridaDisaster.org

SIGN UP FOR SEVERE WEATHER EMAIL ALERTS AT

<http://www.weather.gov/emailupdates/index.php>
VIEW RSS FEEDS AT
<http://mesonet.agron.iastate.edu/projects/>

NOAA Weather Radio

Operating since the 1970's, NOAA Weather Radio has been “the voice of the National Weather Service,” broadcasting weather information 24 hours a day, every day. This “All Hazards” alert mechanism warns the public of both weather-related and non weather-related dangers.

With a NOAA All-Hazards Weather Radio, you can monitor current weather conditions as well as forecasts for your local area. These radios also have an alert feature which will sound a loud alarm—followed by important weather information—whenever a watch or warning is issued. This particular feature has been credited with saving countless lives. Newer models have the capability to connect accessories such as strobe lights and pillow shakers to the radio. These devices, specifically designed for people with special needs, will activate whenever a warning is issued.

NOAA All Hazards Weather Radios can be purchased at most electronics stores, hardware stores, retail stores, or online. Prices start at around \$30. Accessories such as strobe lights and pillow shakers are sold separately.



For additional information on tornadoes and tornado safety visit:

<http://www.weather.gov/om/severeweather/index.shtml>

www.FloridaDisaster.org



A Guide to Tornado Safety