

TORNADOS

Tornadoes can occur at any time of the day or night, during any month of the year. In this area of the nation tornadoes can occur at anytime, but primarily occur between the months of April through October. Tornadoes can be the most brutal of storms. Winds speeds can reach speeds nearing 300 miles per hour and can destroy anything in its path. Tornadoes form rapidly and can travel for miles along the ground, lift up from the ground, and then suddenly change directions and touchdown again! There is little you can do to protect your property from a direct hit by a tornado; however, many actions can be taken to protect you and your family.

DO YOU KNOW THE DIFFERENCE BETWEEN A TORNADO WATCH AND A TORNADO WARNING?

A **Tornado Watch** means weather conditions are favorable for the formation of a tornado. When a tornado watch is issued be prepared to watch the weather and take shelter if conditions worsen. You should also prepare to execute your emergency plan.

- ❖ Check that your [Emergency Supply Kit](#) is in place and check the battery operated devices within.
- ❖ Check to be sure that your shelter and the path to the shelter are accessible
- ❖ Monitor NOAA Weather Radio or local media outlets for the latest information
- ❖ Continue about your normal business

A **Tornado Warning** means that a tornado has been identified and you are in immediate danger from it.

- ❖ **Seek shelter immediately!** A shelter should be someplace that has sturdy and/or reinforced walls, preferably in the interior and underground (or lowest level) of a building.
- ❖ FEMA advocates the creation of a Safe Room for surviving tornadoes or other disasters. Unfortunately, the construction of such rooms, especially in older structures or mobile homes may be impractical or cost prohibitive. However, many rooms in existing structures are safer places than others.
 - ◆ **No room is safe in a mobile home.** Evacuate the home and go to a designated storm shelter.
 - ◆ In a home or building with a **designated storm shelter**, go there immediately.
 - ◆ In a **house or building with a basement**, go to the basement. If the basement has a small interior room (such as a bathroom or closet) this should be your shelter. If there isn't a smaller room in the basement, go under a sturdy piece of furniture such as a work bench.

- ◆ In a **house or building with a slab foundation (no basement)**, seek shelter toward the middle of the structure, in a small room (such as a bathroom or closet) on the lowest floor.
- ◆ Stay away from windows, doors and outside walls. Go to the center of the room. Stay away from corners because they attract debris.
- ◆ If shelter is not available, lie flat in a ditch or other low-lying area. Do not get under an overpass or bridge. You are safer in a low, flat location.
- ◆ Plan to stay in the shelter location until the danger has passed
- ❖ If you live or work with a vision or hearing impaired person, inform them of the tornado warning, and if necessary, guide them to shelter. If you live or work with an otherwise physically disabled individual, recognize that they may need assistance to get to shelter.
- ❖ If you are in charge of safety for many people (e.g., workplace, school, etc.), you should enact your tornado safety plan. Such a plan involves getting everyone in the building to safety immediately.
- ❖ When you are in shelter, assume a safety position. In general, this should be on your knees, bent over with your head against a wall and covered with your arms. If you are restricted to a wheel chair or cannot otherwise assume the standard safety position, you should place yourself in such a way that you are offered maximum protection from the structure around you. Others sheltering with you should assist you in getting into a safe position.

Tornadoes often form and move quickly. There may not be time for the National Weather Service to issue a warning or time for the local official to accurately warn the citizens of Clinton County of a tornado. It is extremely important for you to be alert during a storm. If you do not know if it is safe outside and you think there may be a tornado, take shelter immediately. Better safe than sorry!

Take shelter immediately if you actually observe a twisting, funnel shaped clouds, large hail, strong winds, and loud roaring noise like a train or plane. Always be alert to the changing weather conditions. Take shelter immediately if you hear an outdoor warning siren or see a funnel cloud. It is important that you stay calm and tune into a portable radio for storm updates or instructions. Determine in advance where you will take shelter in case of a tornado warning.

WHAT DO TO DURING A STORM

- ❖ Stay away from windows.
- ❖ In a home or building move to a pre-designated shelter where your disaster supplies kit is located.

- ❖ If underground shelter is not available, move to the inner most room on the lowest level of the building or home.
- ❖ Never try to outrun a tornado in your car; instead, leave it immediately. Find a low-lying area on the ground, (i.e. a ditch or culvert) and crouch down to the ground.
- ❖ Listen to your local radio station for current weather updates
- ❖ **DO NOT call 911 for general information** - only call if you have an emergency!

THE FOLLOWING ARE FACTS ABOUT TORNADOES

- ❖ They may strike quickly, with little or no warning.
- ❖ They may appear nearly transparent until dust and debris are picked up or a cloud forms in the funnel.
- ❖ The average tornado moves Southwest to Northeast, but tornadoes have been known to move in any direction.
- ❖ The average forward speed of a tornado is 30 MPH, but may vary from stationary to 70 MPH.
- ❖ Tornadoes can accompany tropical storms and hurricanes as they move onto land.
- ❖ Waterspouts are tornadoes that form over water.
- ❖ Peak tornado season in the southern states is March through May; in the northern states, it is late spring through early summer.
- ❖ Tornadoes are most likely to occur between 3 p.m. and 9 p.m., but can occur at any time.

TORNADOS – MYTH VS. FACT

1. *"When confronted by a tornado warning, you should open all the windows in your house to equalize the pressure."*

MYTH: This just wastes valuable time. Do not worry about equalizing the pressure, flying debris will generally take care of this problem.

2. *"I live in a big city, a tornado wouldn't hit a big city."*

MYTH: Tornadoes have hit several large cities, including Dallas, Oklahoma City, Wichita Falls, St. Louis, Miami, and Salt Lake City. In fact, an urban tornado will have a lot more debris to toss around than a rural twister will.

3. *"Tornadoes don't happen in the mountains."*

MYTH: Tornadoes do occur in the mountains. Damage from an F3 tornado was documented above 10,000 feet, and a hiker in the mountains of Utah photographed a weak tornado in the mountains.

4. *"Tornadoes may occur in the middle of the night and even during the winter."*

FACT: Although the likelihood is lower at night and during colder months, tornadoes have caused death and destruction during these times of day and year. Violent tornadoes, while very unlikely during the winter months, do occasionally occur at night. When severe weather is forecast, ensure your NOAA weather radio is on and working properly before you go to bed.

5. *"My city doesn't get tornadoes because it is protected by a river."*

MYTH: Many tornadoes have crossed rivers and even gone on to cause widespread damage to riverside cities. For example, the Nachez, Mississippi tornado of 1840 tracked directly down the Mississippi River, killing hundreds, mostly on the water. Others have crossed large rivers without losing speed (they momentarily became water spouts) and devastated cities that folklore had thought immune to tornadoes. An example was the Waco, TX tornado of 1953 that crossed the Brazos River, or the Great St. Louis Cyclone of 1896 that jumped the Mississippi River.

6. *"Tornadoes have picked people and items up, carried them some distance and then set them down without injury or damage."*

FACT: People and animals have been transported up to a quarter mile or more without serious injury. Fragile items, such as sets of fine china, or glassware have been blown from houses and recovered, miles away, without any damage. However, given the quantity of airborne debris, these occurrences are the exception, rather than the norm.

7. *"Hiding under a freeway overpass will protect me from a tornado."*

MYTH: While the concrete and re-bar in the bridge may offer some protection against flying debris, the overpass also acts as a wind tunnel and may actually serve to collect debris. When you abandon your vehicle at the overpass and climb up the sides, you are doing two things that are hazardous. First, you are blocking the roadway with your vehicle. When the tornado turns all the parked vehicles into a mangled, twisted ball and wedges them under the overpass, how will emergency vehicles get through? Second, the winds in a tornado tend to be faster with height. By climbing up off the ground, you place yourself in even greater danger from the tornado and flying debris. When coupled with the accelerated winds due to the wind tunnel (Venturi Effect), these winds can easily exceed 300 mph. Unfortunately, at least three people hiding under underpasses during tornadoes have already been killed, and dozens have been injured by flying debris. If you realize you won't be able to outrun an approaching tornado, you are much safer to abandon your vehicle, and take shelter in a road-side ditch or other low spot.

8. *"I can outrun a tornado, especially in a vehicle."*

MYTH: Tornadoes can move at up to 70 mph or more and shift directions erratically and without warning. It is unwise to try to outrace a tornado. It is better to abandon your vehicle and seek shelter immediately.

9. *"Tornadoes are more likely to hit a mobile home park."*

MYTH: Not so. It just seems that way for two reasons. First, mobile home parks are a ubiquitous part of our landscape. There are tens of thousands of mobile homes in tornado alley, so there is a pretty good likelihood that some of them will be in the path of a tornado. Unfortunately, the second factor is that mobile homes offer little to no protection against even the weakest tornadoes, so when a tornado does strike a mobile home park, the damage is more likely to be significant. Winds that would only lift some shingles on a frame house can easily flip a mobile home.

10. *"Strong, sturdy brick or stone buildings will protect me from a tornado."*

MYTH: While such buildings will provide more protection in a tornado than a mobile home or timber frame structure, the winds of a tornado can easily launch a 2x4 through a brick wall, and can cause even the sturdiest of buildings to experience roof or wall failure.

11. *"To keep from being sucked into the tornado, can tie myself to a well pipe, just like they did in the movie "Twister"."*

MYTH: While it is unlikely that a tornado will dislodge a deeply buried pipe, the rope you tie around yourself is more likely to act as a combination tetherball and cheese slicer. Lighter winds will likely cause you to be whipped around at the end of the rope, banging against anything within the radius of the rope. Stronger winds inside the tornado are just as likely to pull your body from the rope (and possibly not in one piece).

12. *"A tornado can drive a straw through a telephone pole."*

FACT: The forces inside a tornado are incredible, and still poorly understood. Nevertheless, they are certainly strong enough to turn otherwise harmless items into deadly missiles.