

The Enhanced Fujita Scale (The EF-Scale)

The Enhanced Fujita Scale (EF-Scale) is a modified version of a tornado scale developed by Dr. Ted Fujita. The purpose of the EF-scale is to categorize tornadoes by the damage they cause based on their wind speeds. The weakest tornado on the scale is an EF-0 tornado and the strongest is an EF-5 tornado. However, all tornadoes are dangerous and can cause significant threats to life and property.

Rating	Wind Speeds	Damage
EF-0	65-85 mph	Minor/Limited
EF-1	86-110 mph	Moderate
EF-2	111-135 mph	Considerable
EF-3	136-165 mph	Severe
EF-4	166-200 mph	Massive
EF-5	≥200 mph	Extreme

Tornadoes with an EF-2 or greater rating are called “significant tornadoes” by the Storm Prediction Center. However, only about 15% of all tornadoes are an EF-2 rating or greater.

To learn more about the Enhanced Fujita Scale, go to: <http://www.spc.noaa.gov/efscale/>.



NSSL photo by Steve Tegtmeier

Union City, Oklahoma, May 24, 1973

Credit: Wikipedia, National Severe Storms Laboratory

Tornado Safety

The importance of staying safe during a tornado cannot be understated. Tornadoes killed over 100 people per year between 2004 and 2013, 12.7% of the deaths in that same time period were young people under 20 years old (NWS Office of Climate, Water, and Weather Services). The following safety tips could save you from joining that statistic.

- If a tornado warning is issued for your area, it means a tornado been spotted via radar or identified by a trained spotter or law enforcement official. Therefore, you should go into shelter immediately!
- A good shelter should be a basement or on the lowest floor of the building in an interior room. You should stay away from windows, doors, and floors higher than the ground level.
- If you are outdoors, seek shelter immediately. Do not go to your vehicle in a tornado situation. If there is no shelter, crouch down away from trees, overpasses, and telephone polls and cover your head.
- Only emerge from your shelter when you know the tornado threat has ceased. Keep in mind, other severe and hazardous weather (e.g. flooding, lightning, hail, and strong winds) may still be occurring.

To learn more about tornadoes and tornado safety go to:

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<http://www.nws.noaa.gov/os/severeweather/>

Cover Photo Credit: New York Times

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Severe Weather: Tornadoes



Tuscaloosa, Alabama
April 27, 2011

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StormReady in a Box
Supplemental Information Pamphlet
NWS Twin Cities
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What is a Tornado?

A **tornado** is a violent, rotating weather system whose rotation extends from the cloud deck to the ground. Tornadoes typically begin their lives as a **funnel cloud**, which is a rotating cloud that extends from the bottom of the cloud but does not reach the ground.

Tornadoes are one of the most amazing and destructive natural phenomena on Earth. Many people spend their lives “chasing” tornadoes, by travelling to regions where tornadic conditions are possible so they can follow a tornado on ground.

Tornadoes vary in width from less than 50 feet to miles wide, but it is important to know that size does not indicate strength!

The key to identifying a tornado is that it the rotating cloud system extends from the cloud deck to the ground. Often times, untrained eyes will confuse funnel clouds, scud clouds (wind torn cloud fragments), and dust devils (rotating columns of dust or debris) as tornadoes. None of these extend from the cloud deck to the ground, and if they look as though that they do, they actually are extending upward from the ground.



The dust devil (left) and scud cloud (right) are frequently confused with tornadoes to untrained observers.

Photo Credit: Dust Devil– Wikimedia Commons, Scud– NWS

What Causes a Tornado?

There are many types of weather phenomena that can cause a tornado. Tornadoes can occur in hurricanes (albeit, weak tornadoes), mesoscale convective systems, and **supercells**, which are strong rotating thunderstorms that often consist of frequent and intense lightning, strong gusty winds, heavy rain, hail, and of course, tornadoes. Supercells can be identified with by noticing such features as an overshooting top, an anvil cloud, and a shelf cloud.

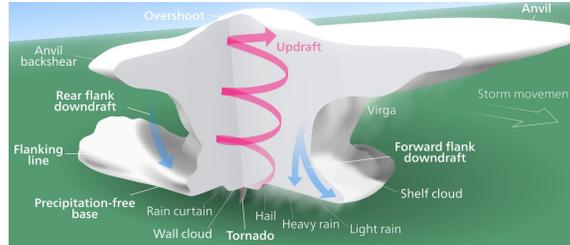


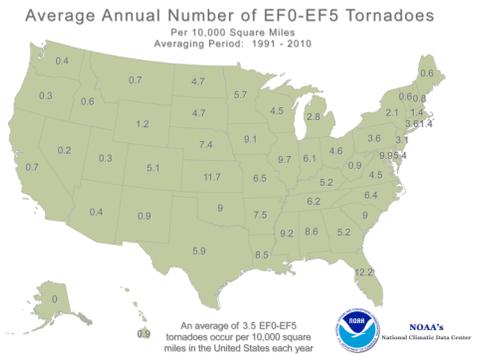
Diagram of a Supercell
Photo Credit: Wikipedia

Tornadoes initially form due to upper air rotation which begins to slowly lower with time (the funnel cloud stage). Tornadoes also need an incredible amount of energy and instability in the atmosphere. Overtime, the funnel cloud extends down before making contact with the ground. Tornadoes can last on the ground for less than a minute to over an hour. Tornadoes can travel minute distances or miles.

Tornadoes eventually run out of energy to continue on. They eventually assume a long-rope like structure (where the winds can still be incredibly damaging) before dissipating into the cloud deck.

When and Where Do Tornadoes Occur?

Tornadoes can occur any time during the year. However, tornadoes most frequently occur in the late Spring through the Fall. In addition, occasionally, tornadoes can form in association with a landfall tropical cyclone. Tornadoes are most prevalent in the Great Plains stretching from Texas through the Dakotas, or Tornado Alley. Tornadoes are also very common across the inland South, stretching from Arkansas and Mississippi, stretching across to the Carolinas, or Dixie Alley. However, a tornado has been recorded in every in state in the United States.



Tornadoes are most commonly found in the United States, but can occur in other parts of the world, including Central Canada, Northern Mexico, China and Australia.



Source/Photo Credit: NOAA's National Climatic Data Center