

SAFETY MEMO

May 1st, 2023 – Tornadoes



Did you know?

Basics on Tornadoes

Tornadoes are violent rotating columns of air that come from thunderstorms: inside the thunderstorm, warm, humid air rises while cool air falls along with rain and hail¹. Tornadoes can be hard to see until water droplets, dust, and debris are picked up. There are about 1,200 tornadoes in the U.S. each year.

The National Oceanic and Atmospheric Administration (NOAA) is an organization that notifies of Tornado Watch and Tornado Warnings across the U.S. In Canada, Environment Canada issues notifications via radio, television, social media, and text messaging. In Europe, European Multi service Meteorological Awareness (EMMA) and Meteocalarm is a multi-hazard warning systems providing warnings to the EUMETNET partners which include France, Switzerland, and Belgium².

Tornado Notifications Definitions

- Tornado Watch monitors for potential tornadoes and alert people in the area to prepare.
- Tornado Warning means a tornado has been spotted and indicates that people in the area should act immediately and find safe shelter.

Determining Tornado Strength

Tornado strength is determined using the Enhanced Fujita (EF) Scale with ratings between 0 - 5 based on wind speeds. The EF-Scale estimates the wind speed by accounting for the damage caused by the tornadoes based on 28 damage indicators such as building type, structures, and the presence of trees. For each damage indicator, there are 8 degrees of damage ranging from the beginning of visible damage to complete destruction³.

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

Figure 1: Enhanced Fujita Scale for Tornado Strength.¹

Being Alert to Weather Conditions

If thunderstorms are expected, check in with local radio, television stations, or your governmental weather reporting agency for more information. Tornadoes may rapidly appear without a tornado warning, and usually strike in the afternoon or early evening⁴.

Weather signs that may indicate a tornado is coming:

- Severe thunderstorms with frequent thunder and lightning
- Dark or green-colored sky
- Large, dark, low-level cloud
- Large hail
- Loud roar or whistle
- A funnel cloud at the rear base of a thundercloud⁵

Preparing for a Tornado

Determine an emergency plan suitable for your location and find access to a safe shelter for yourself and others. Educate children about tornado safety and precautions before they experience a tornado.

Have the following items at hand during a tornado:

- New batteries and a battery-operated TV or radio for updates on emergency weather information
- Emergency kit (water, non-perishable food, and medication for humans and for any pets)
- Important information (phone numbers, addresses, passports, veterinary contacts, etc.)

Seeking Shelter

Most injuries and deaths during a tornado are due to falling and flying debris. Do not stay in a mobile home or a car.

Seek a location that provides more protection⁶:

- Basement or a room without windows on the lowest floor
- Get under a something sturdy like a heavy table or workbench
- Protect your head and cover your body with a blanket, sleeping bag, or mattress

¹ SciJinks. How do tornadoes form? ND. Retrieved from <https://scijinks.gov/tornado/>

² EUMETNET. EMMA objectives. ND. Retrieved from <https://www.eumetnet.eu/activities/forecasting-programme/current-activities-fc/emma/>

³ NSSL. Tornado Basics. 2022. Retrieved from <https://www.nssl.noaa.gov/education/svrwx101/tornadoes/>

⁴ Government of Canada. Tornadoes. Feb 21, 2018. Retrieved from <https://www.getprepared.gc.ca/cnt/hzd/trnds-en.aspx>

⁵ Ibid.

⁶ Centers for Disease Control and Prevention. Staying Safe in a Tornado. April 4, 2022. Retrieved from <https://www.cdc.gov/disasters/tornadoes/index.html>

