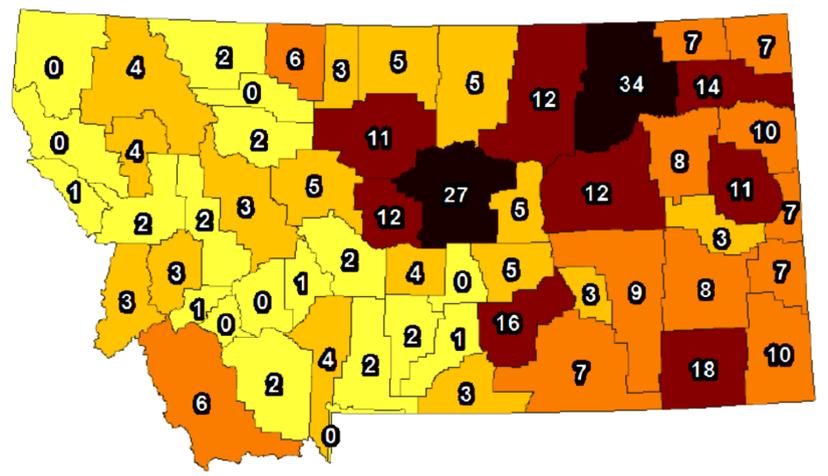
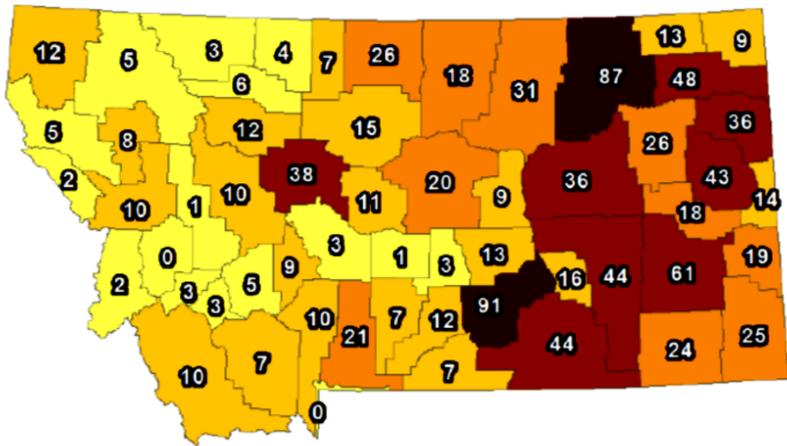


Montana experiences a full range of weather related hazards. In 2014 alone, Montana had 8 tornadoes confirmed, 129 high wind and damaging wind events, 236 large hail reports and 8 flash floods; causing hundreds of thousands of dollars in damage and resulting in several injuries. The following graphics show the number of public reported severe weather related events across Montana dating back to 1950.

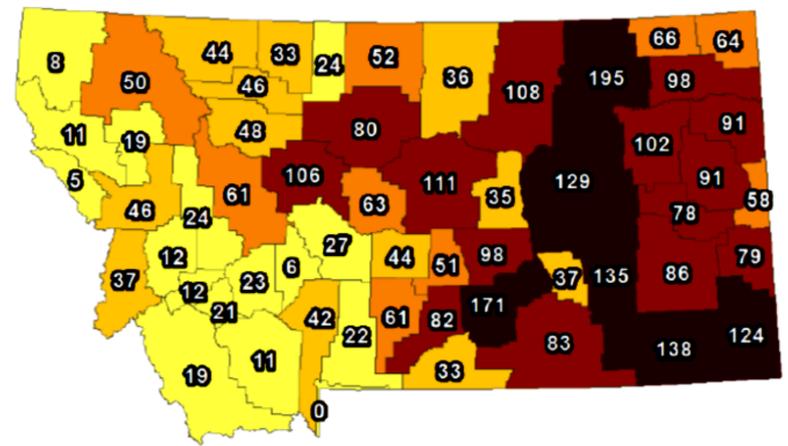
Tornadoes - 1950 - 2014



Wind Events (>= 70mph) - 1950 - 2014



Hail Events (>= 1 Inch) 1950 - 2014



MONTANA STRONG

BUILDING MONTANA'S DISASTER RESILIENCE TOGETHER

Severe Summer Weather

THUNDERSTORMS (no label)	1 - MARGINAL (MRGL)	2 - SLIGHT (SLGT)	3 - ENHANCED (ENH)	4 - MODERATE (MDT)	5 - HIGH (HIGH)
No severe* thunderstorms expected	Isolated severe thunderstorms possible	Scattered severe storms possible	Numerous severe storms possible	Widespread severe storms likely	Widespread severe storms expected
Lightning/flooding threats exist with all thunderstorms	Limited in duration and/or coverage and/or intensity	Short-lived and/or not widespread, isolated intense storms possible	More persistent and/or widespread, a few intense	Long-lived, widespread and intense	Long-lived, very widespread and particularly intense
• Winds to 40 mph • Small hail	• Winds 40-60 mph • Hail up to 1" • Low tornado risk	• One or two tornadoes • Reports of strong winds/wind damage • Hail ~1", isolated 2"	• A few tornadoes • Several reports of wind damage • Damaging hail, 1 - 2"	• Strong tornadoes • Widespread wind damage • Destructive hail, 2" +	• Tornado outbreak • Derecho

* NWS defines a severe thunderstorm as measured wind gusts to at least 58 mph, and/or hail to at least one inch in diameter, and/or a tornado. All thunderstorm categories imply lightning and the potential for flooding. Categories are also tied to the probability of a severe weather event within 25 miles of your location.

A Severe Thunderstorm Watch and Tornado Watch mean that conditions are favorable for the development of severe weather and that you should prepare to take action in the event that a Severe Thunderstorm or Tornado Warning is issued. The Storm Prediction Center in Norman, OK, coordinates with local National Weather Service forecast offices to determine what areas are at the greatest risk for severe weather and issues severe weather watches....

...The local National Weather Service forecast offices, closely monitor each situation and issue Severe Thunderstorm and Tornado Warnings when a thunderstorm becomes capable of damaging winds of 58 mph or greater, hail 1 inch or larger, and/or tornadoes.

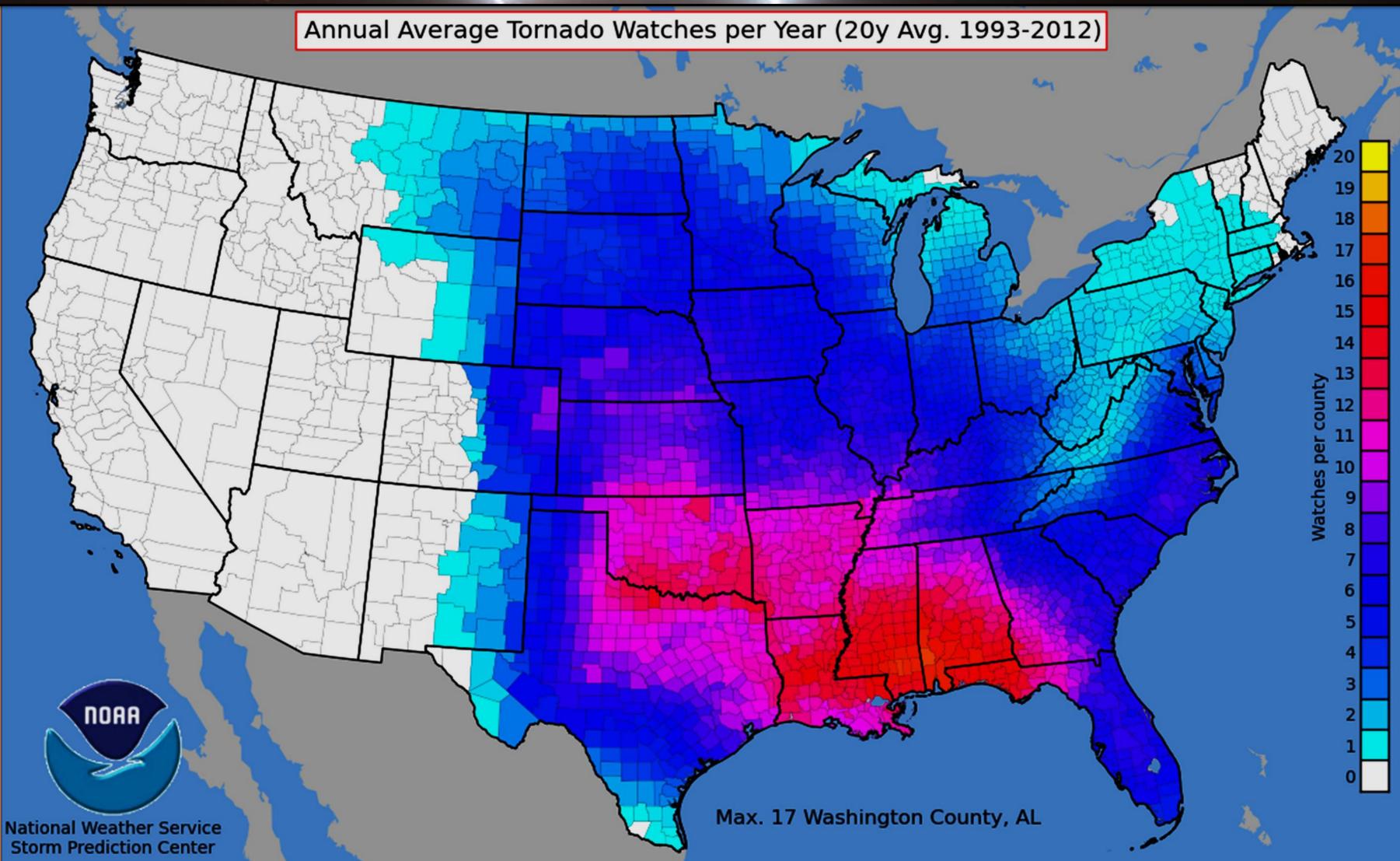
On average, the Storm Prediction Center issues a higher number of Severe Thunderstorm and Tornado Watches across the eastern half of Montana. Very few if any Tornado Watches, on average are issued over western and southwest Montana with an average of 2 to 5 Severe Thunderstorm Watches.

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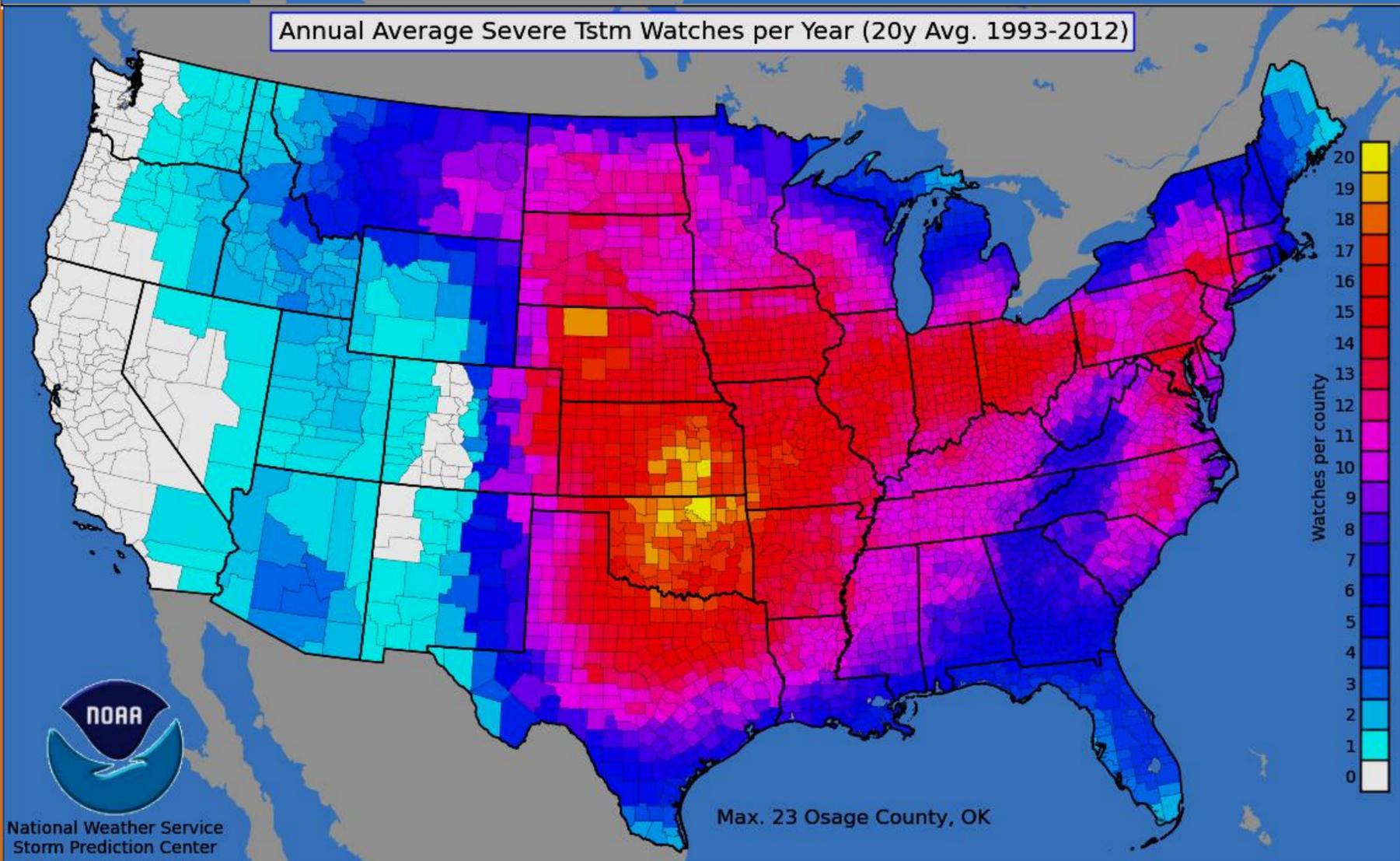
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Annual Average Tornado Watches per Year (20y Avg. 1993-2012)



Annual Average Severe Tstm Watches per Year (20y Avg. 1993-2012)



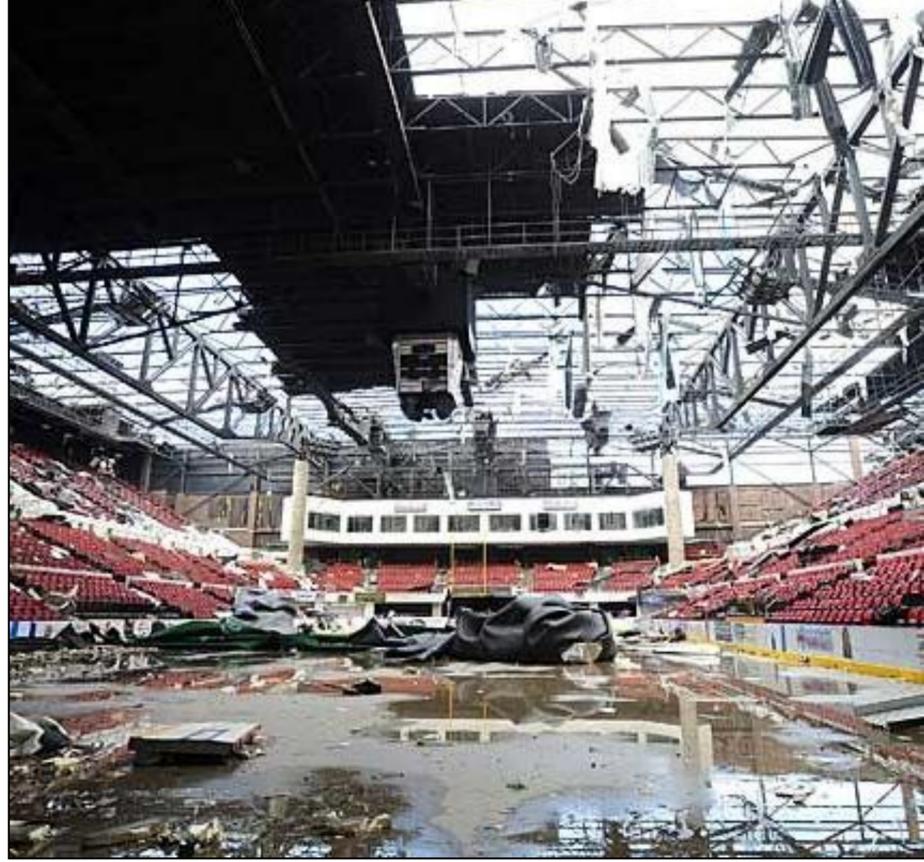
Billings Tornado

June 20, 2010

EF-2 Magnitude

\$45 Million in Damages

Governor Brian Schweitzer declared a state of emergency after the largest tornado to hit the City of Billings in more than 50 years peeled the roof off of a sports arena, causing millions of dollars in damage on June 20, 2010. No deaths or major injuries were reported. The 35-year old, 12,000-seat Metra - the state's largest arena - draws crowds that pump millions of dollars into the local economy. The Metra was repaired and upgraded in less than one year. Wind speeds from the tornado were estimated at 111 to 135 mph. The winds damaged homes, snapped trees and telephone poles and left tangles of insulation and metal roofing strewn for hundreds of yards - some of it hanging from power lines. The twister hovered for about 15 minutes over the arena.



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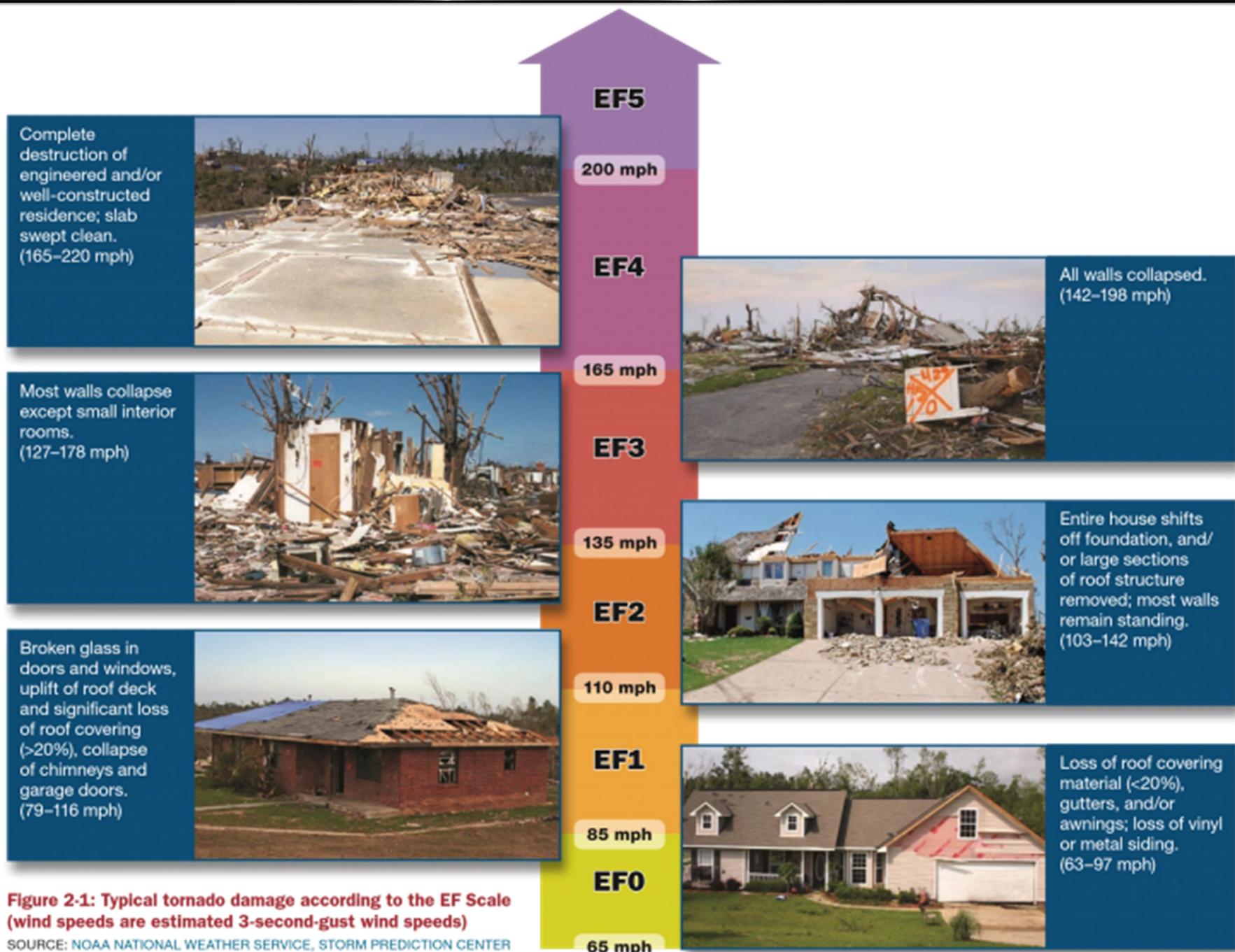


Figure 2-1: Typical tornado damage according to the EF Scale (wind speeds are estimated 3-second-gust wind speeds)
SOURCE: NOAA NATIONAL WEATHER SERVICE, STORM PREDICTION CENTER

The Enhanced Fujita Scale, or EF Scale, is the scale for rating the strength of tornadoes in the United States.

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Severe Summer Weather

Lightning

1. **"If you're caught outside during a thunderstorm, you should crouch down to reduce your risk of being struck."** – Crouching doesn't make you any safer outdoors. Run to a substantial building or hard topped vehicle. If you are too far to run to one of these options, you have no good alternative. You are NOT safe anywhere outdoors.
2. **"If it's not raining or there aren't clouds overhead, you're safe from lightning."** – Lightning can strike up to 10-15 miles away from a thunderstorm.
3. **"A lightning victim is electrified. If you touch them, you'll be electrocuted."** – The human body does not store electricity. It is perfectly safe to touch a lightning victim to give them first aid.
4. **"If outside in a thunderstorm, you should seek shelter under a tree to stay dry."** – Being underneath a tree is the second leading cause of lightning casualties.
5. **"If thunderstorms threaten while you are outside playing a game, it is okay to finish it before seeking shelter."** – Many lightning casualties occur because people do not seek shelter soon enough. No game is worth death or life-long injuries. Seek proper shelter immediately if you hear thunder.

Tornadoes and Straight-Line Winds

1. **"Lakes, rivers, and mountains protect areas from tornadoes."** – No geographic location is safe from tornadoes. A tornado near Yellowstone National Park left a path of destruction up and down a 10,000 foot mountain.
2. **"Straight-line winds do less damage than a tornado"** – Straight-line winds are more common than tornadoes in Montana and can cause just as much damage as a EF-2 tornado with wind speeds 100+ mph and can produce a damage path extending for hundreds of miles.
3. **"Highway overpasses provide safe shelter from tornadoes."** – The area under a highway overpass is very dangerous in a tornado. If you are in a vehicle, you should immediately seek shelter in a sturdy building.
4. **"Open windows before a tornado approaches to equalize pressure and minimize damage."** – Leave the windows closed. Take shelter immediately. An underground shelter, basement or safe room are the safest places. If none of those options are available, go to a windowless interior room or hallway.
5. **"It is safe to take shelter in the bathroom, hallway, or closet of a mobile home."** – Mobile homes are not safe during tornadoes! Abandon your mobile home to seek shelter in a sturdy building immediately. If you live in a mobile home, ensure you have a plan in place that identifies the closest sturdy buildings.

PRACTICE YOUR PLAN

WHEN THE POWER GOES OUT, KEEP YOUR GENERATOR OUTSIDE

1. **KNOW THE RISK** for your area
2. **BE INFORMED!** Have a **NOAA Weather Radio** – to receive the latest warnings and other emergency information
3. **PREPARE A FAMILY PLAN** – that includes an emergency meeting place and other safety and contact information
4. **TAKE ACTION** if a warning is issued! Have a **safe room in your home and work** – such as a basement or a small, windowless interior room or hallway on the lowest level of your home or sturdy building
5. **EVACUATE mobile homes immediately** – as a last resort go to a ditch and lie flat on the ground protecting your head from flying debris and hail
6. **AFTER THE STORM** – avoid any damaged areas, downed power lines, trees and broken gas lines

Portable back-up generators produce the poison gas carbon monoxide (CO). CO is an odorless, colorless gas that kills without warning. It claims the lives of hundreds of people every year and makes thousands more ill. Follow these steps to keep your family safe.

Portable Generators

- ✓ Never use a generator inside your home or garage, even if doors and windows are open.
- ✓ Only use generators outside, more than 20 feet away from your home, doors, and windows.

CO Detectors

- ✓ Install battery-operated or battery back-up CO detectors near every sleeping area in your home.
- ✓ Check CO detectors regularly to be sure they are functioning properly.

CARBON MONOXIDE (CO) POISONING



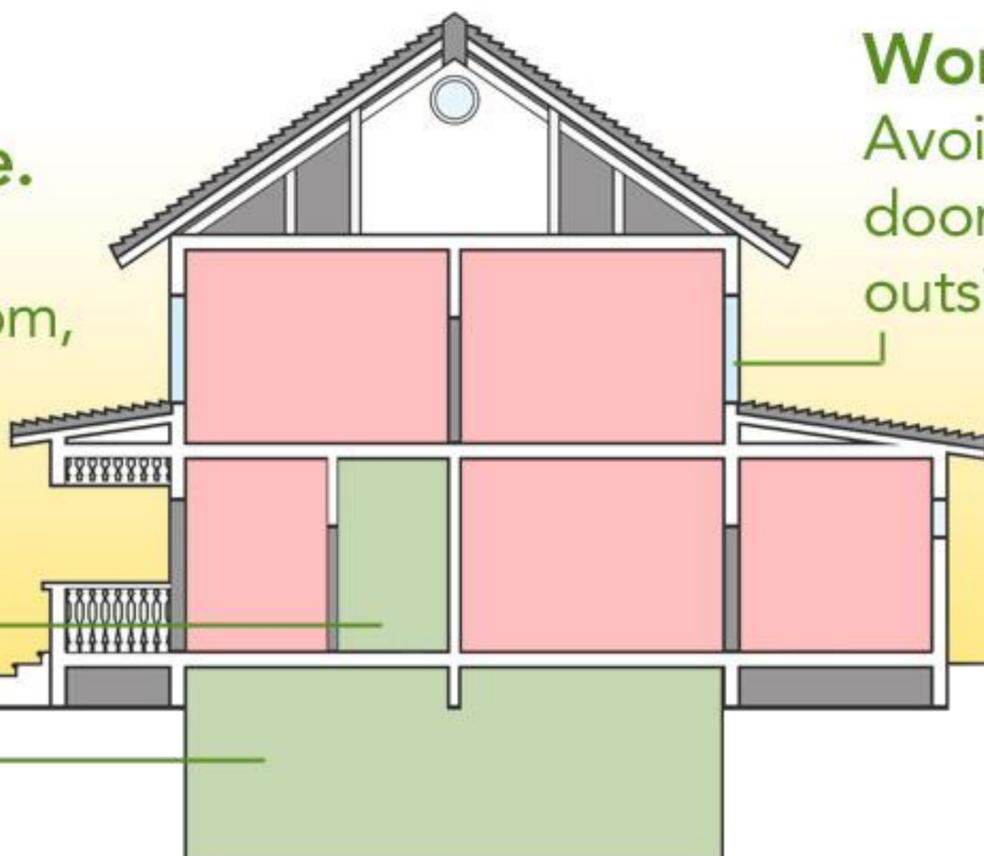
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Tornado Shelter Tips

Safest place.
Basement or interior room, stairwell or hallway on a low floor.



Worst place.
Avoid windows, doors and outside walls.

Cover yourself with blankets or a mattress for protection. A helmet can be used for added protection against head injuries.

Consider building a safe room in your basement or in the center of your house than can withstand a tornado.