

Ch 20.3 Tornadoes

Objective: Be able to...

- *Identify how tornadoes are rated.*
- *Identify and define a tornado*
- *Compare a tornado, funnel cloud, and waterspout*

Define what a tornado is.

- The smallest, most violent, and shortest lived storm is a tornado.
- A ***tornado*** is a violently rotating column of air that is in contact with the ground.



When is a tornado not a tornado?

- It's called a ***funnel cloud*** until it makes contact with the ground.



Tornado over water is called what?

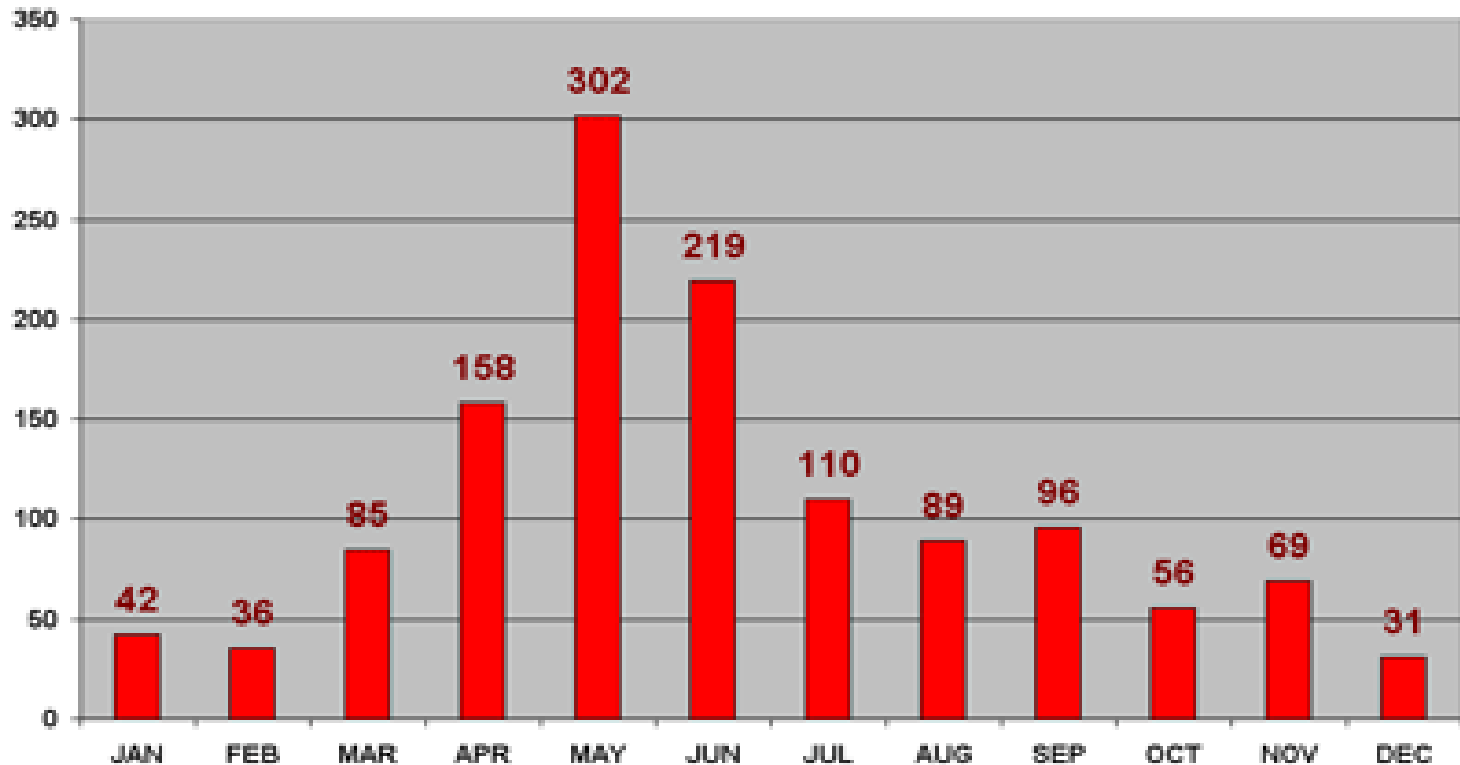
- Tornadoes over the water are called ***waterspouts***.



(Courtesy WPLG)

When do most tornadoes occur?

AVERAGE U.S. TORNADO FREQUENCY
(1999-2008)



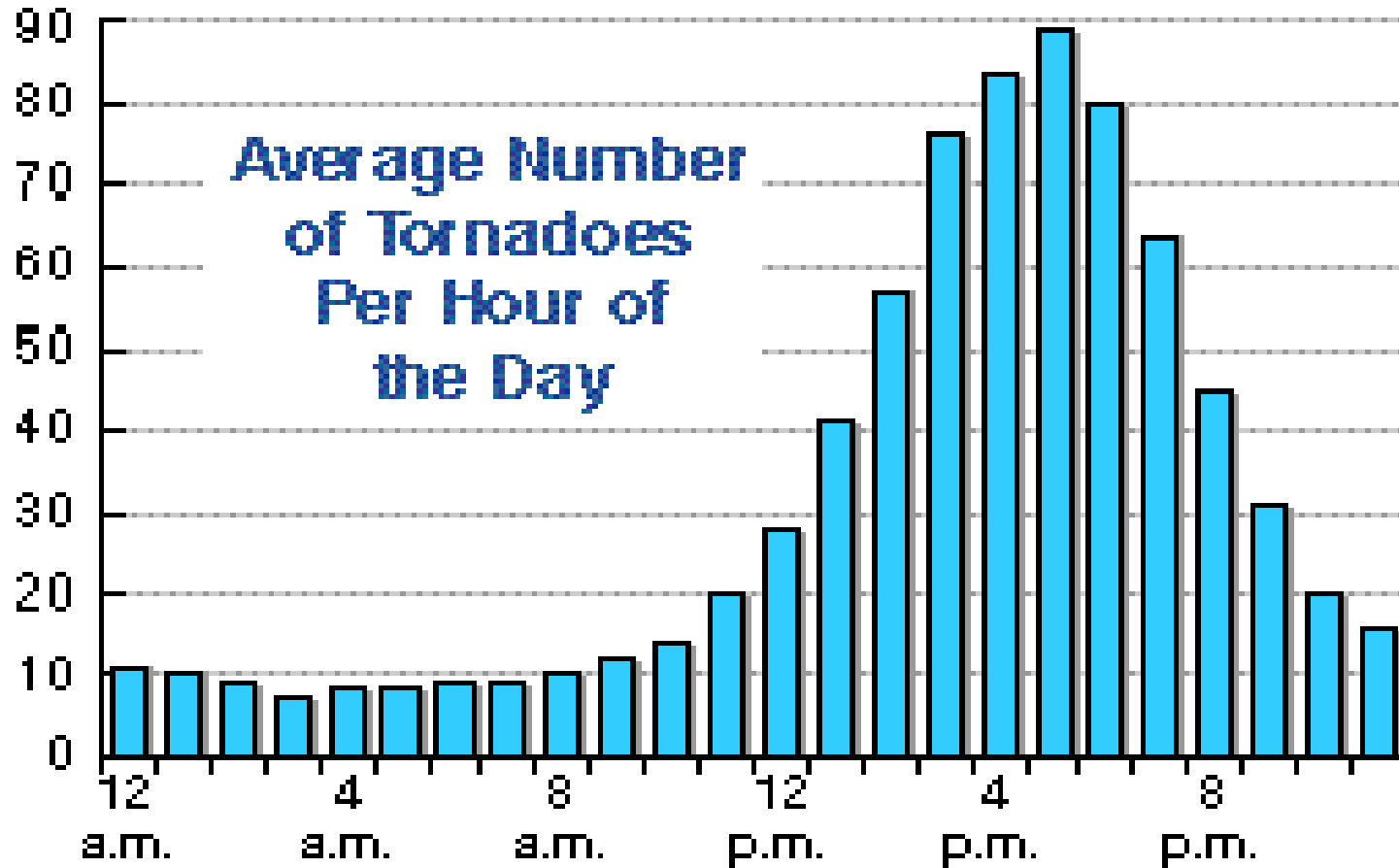
- ***April to July***
- ***During late spring to early summer.***

Months of Peak Tornado Occurrence

1950 - 1991



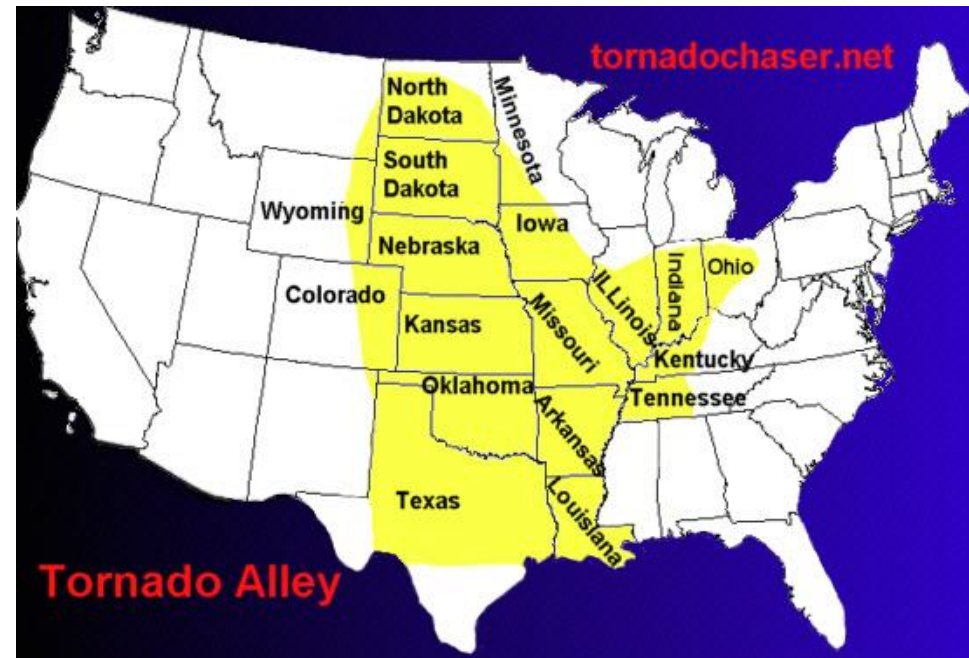
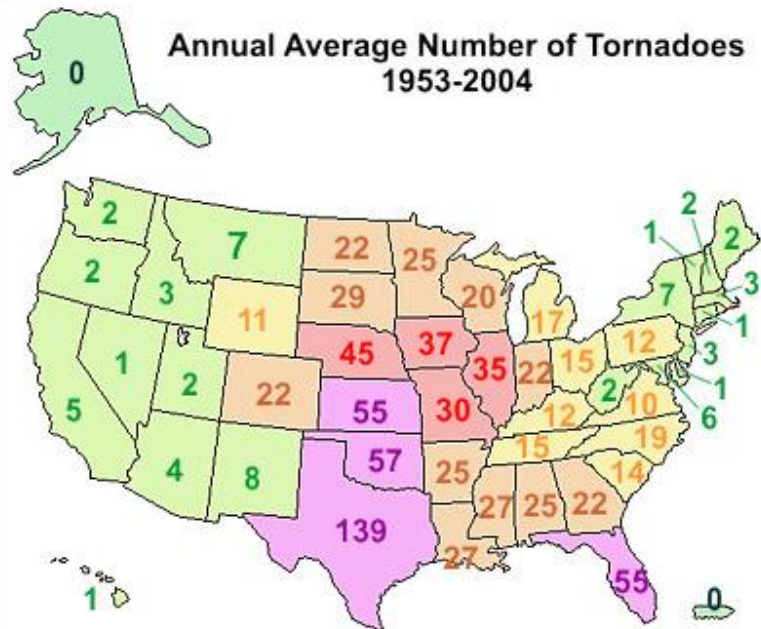
What time do most tornadoes occur?



- ***2 pm to 8 pm***
- ***During afternoon and evening hours***

Where do tornadoes most occur in the world?

- *U.S. is # 1*
- *Tornadoes are most common in “Tornado Alley.”*





Tornado Intensity

- *The winds in a tornado cause the destruction.*
- *The winds are created from the lower pressure in the tornado.*
- *Most of the injuries caused by tornadoes occur when people are trapped in collapsing buildings or are struck by flying debris.*



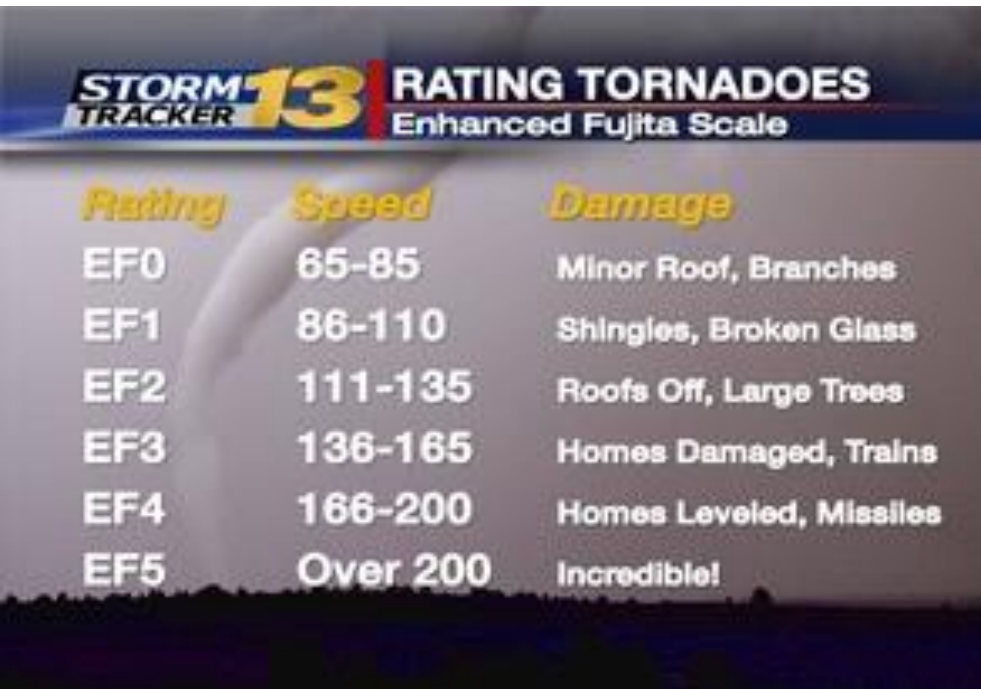
Identify the scale used to measure tornadoes

Fujita Scale

- Because tornado winds cannot be measured directly, a rating on the Fujita scale is determined by assessing the worst damage produced by the storm.

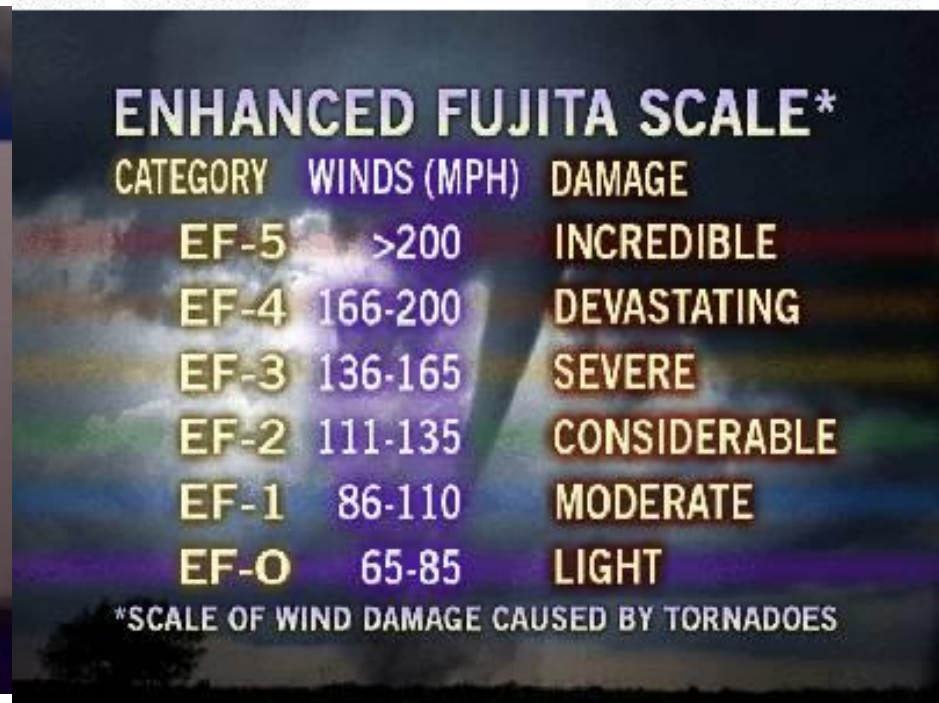
FRIDAY WEATHER WHYS

8:43AM EDT 23-APR-2010



STORM TRACKER 13 RATING TORNADOES
Enhanced Fujita Scale

<i>Rating</i>	<i>Speed</i>	<i>Damage</i>
EF0	65-85	Minor Roof, Branches
EF1	86-110	Shingles, Broken Glass
EF2	111-135	Roofs Off, Large Trees
EF3	136-165	Homes Damaged, Trains
EF4	166-200	Homes Leveled, Missiles
EF5	Over 200	Incredible!



ENHANCED FUJITA SCALE*

CATEGORY	WINDS (MPH)	DAMAGE
EF-5	>200	INCREDIBLE
EF-4	166-200	DEVASTATING
EF-3	136-165	SEVERE
EF-2	111-135	CONSIDERABLE
EF-1	86-110	MODERATE
EF-0	65-85	LIGHT

*SCALE OF WIND DAMAGE CAUSED BY TORNADOES

Weak Tornadoes F0-F1

- **69% of all tornadoes**



- *IL 2013 = 63%*
- *TX 2013 = 96%*



Clear in Downey |

Strong Tornadoes F2-F3

- **29% of all tornadoes**
- *Utica, IL*
- *April 20, 2004*



A tornado moves along the ground near Granville, Ill., Tuesday afternoon. It was one of more than 50 twisters that hit the Midwest Tuesday, killing at least 3 people.

- *IL 2013 = 34%*
- *TX 2013 = 2%*

Violent Tornadoes F4-F5

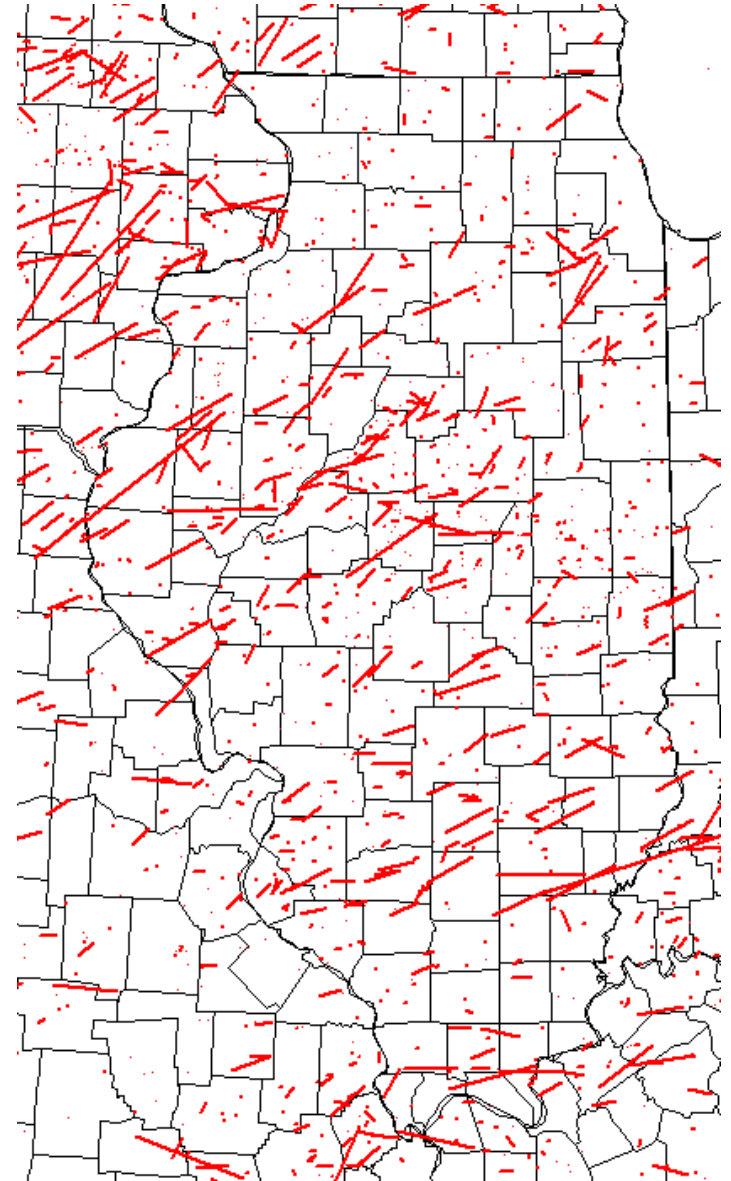
- **Only 2% of all tornadoes**
- *Plainfield, IL*
- *Aug. 28, 1990*



- *IL 2013 = 3%*
- *TX 2013 = 1%*

Which direction do they move?

- The average tornado moves Southwest to Northeast.
 - *The average forward speed of a tornado is 30 MPH.*



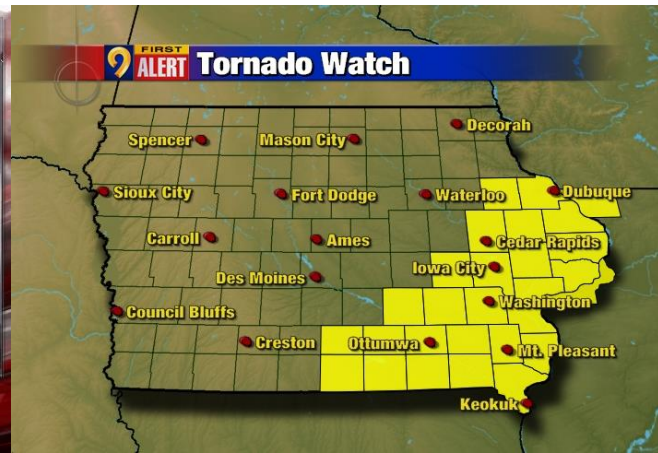
Environmental Clues

- Look out for:
 - *Dark, often greenish sky*
 - *Wall cloud*
 - *Large hail*
 - *Loud roar; similar to a freight train*



Tornado Watch

- Tornado Watch
 - alert people to the possibility of tornadoes in a specified area for a particular time.





Tornado Warning

- Tornado Warning

- A tornado warning is issued when a tornado has actually been sighted in an area or is indicated by weather radar.

