

Tornadoes in Oklahoma: What are the Chances?

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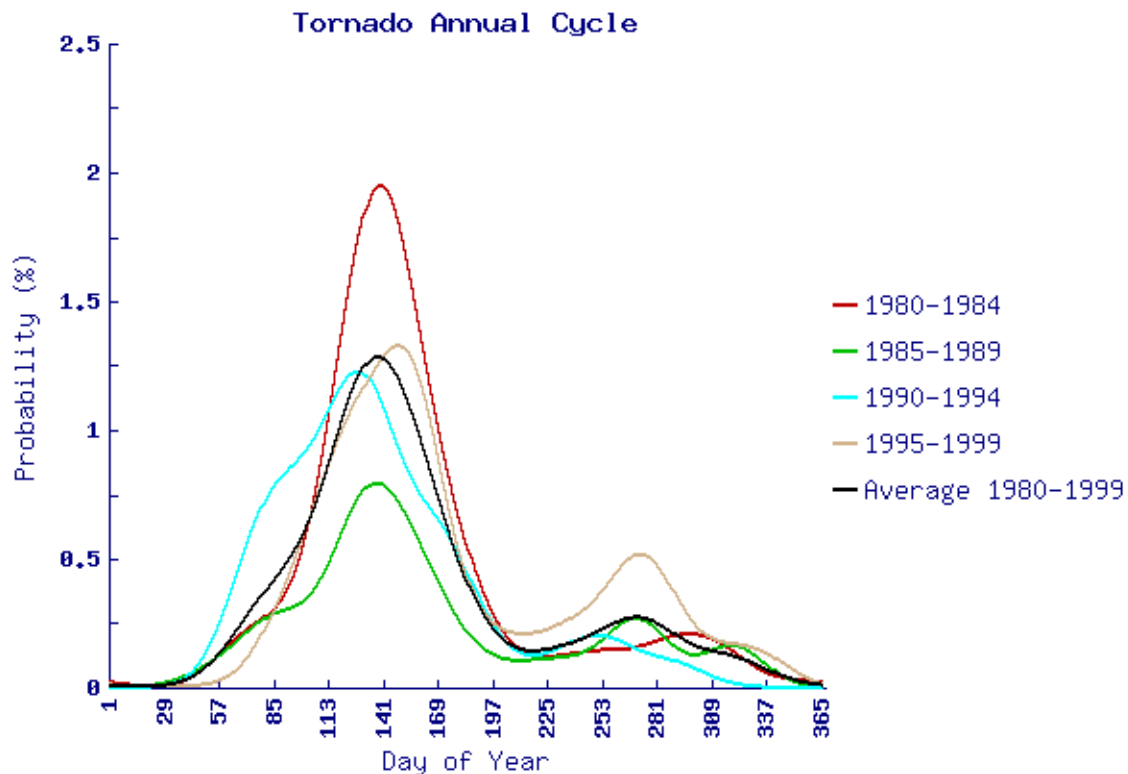
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Given the recent damage to the Enid fairgrounds facility and the attendant publicity, many are beginning to wonder if Oklahoma will be a safe place to hold the competition. The short answer is “Yes,” but let’s examine that in a bit more detail and with some context.

A lot of information can be found about severe weather at <http://www.nssl.noaa.gov/hazard/hazardmap.html>, and that’s where most of the severe weather probability information comes from that you see here.

The event will be held in Enid near the end of October. That places it just to the left of the day 281 index in the figure below. That figure shows the probability of a severe weather event (in this case any kind of tornado) occurring on any given day in Enid, OK. The 20 year average probability (black line) is the one to look at here.



There are two peaks in tornado activity during the year. The main peak is in the Spring, and peaks in about the third week of May. There is a secondary peak in the Fall, usually in September. The event date is just to the right of the day 281 reference mark, on the decline of the Fall peak. On average, the probability of a tornado within about 25 nautical

miles of Enid Oklahoma around the 20th of October is less than 0.25%. Some decades it's more and some decades it's less. This means that around the end of October the area within about 25 nm of Enid will experience a tornado once every 400-500 years, or about a 1 in 400 to 1 in 500. How does this compare to more mundane risks? Here's some information from <http://www.cotf.edu/ete/modules/volcanoes/vrisk.html> that applies to the entire US, not just Enid, OK:

Event	Chance This Year
Car stolen	1 in 100
House catch fire	1 in 200
Die from Heart Disease	1 in 280
Die of Cancer	1 in 500
Die in Car wreck	1 in 6,000
Die by Homicide	1 in 10,000
Die of AIDS	1 in 11,000
Die of Tuberculosis	1 in 200,000
Win a state lottery	1 in 1 million
Killed by lightning	1 in 1.4 million
Killed by flood or tornado	1 in 2 million
Killed in Hurricane	1 in 6 million
Die in commercial plane crash	1 in 1 million to 10 million (depends on airline)

Notice that even here, the chances of being *killed* by a tornado are pretty small. Obviously, not all of these odds can be applied evenly everywhere in the US. Regardless, here are a couple of more: from the National Highway Traffic Safety Administration, we learn that averaged over the entire US, each of us may expect to be in some kind of automobile accident about every ten years. Thus, your odds of being in some kind of car accident this year is 1 in 10. But these odds are still better than the odds of the police department being able to solve a murder: that's only about 1 in 2.

Hopefully you see now that the odds of experiencing a tornado during your visit to Enid is pretty far down on the list of Things To See in Oklahoma. Bring a coat, though, because in October, Enid experiences an average of 0.1 inch of snowfall a year, which almost always falls in the last half of the month!