

Notes on Tornado History

The maps presented here have been constructed with as high a degree of accuracy as possible. However, plotting historical tornado tracks is fraught with the potential for error. Some sources of possible error are listed here:

1. Three databases were used to collect the data. One was official National Weather Service (NWS) data, via the Storm Prediction Center (formerly the National Severe Storm Forecast Center) and the National Climatic Data Center. The NWS provided information from 1950 to present. The other sources were *Significant Tornadoes 1681-1991* (Environmental Films, 1993) and its supplement *Significant Tornadoes Update 1992-1995* (The Tornado Project of Environmental Films, 1997), both by tornado researcher Thomas P. Grazulis. Occasionally there were disagreements between Grazulis and the NWS. Where there were disagreements in tornado strength (i.e., Fujita scale numbers), the official NWS number was used (from 1950 to present, since NWS data is only available back to 1950; before 1950 Grazulis' F-scale numbers were used). Where there were disagreements in tornado location, Grazulis was usually used because Grazulis provided more precise locations (usually "x" miles from a town) than did the NWS (which uses latitude/longitude). Of course, all pre-1950 locations are, by necessity, from Grazulis.
2. The Grazulis books only include tornadoes that were either F2 or stronger on the Fujita Scale, or resulted in a fatality. For weak tornadoes not included in Grazulis' books, strength and location data came from NWS records. Because the NWS uses latitude/longitude pairs for tornado locations, there is bound to be some error in the exact placement of those tornadoes on these maps. For instance, a tornado may have occurred on the northwest side of a town, but that fact may be difficult to ascertain from a latitude/longitude pair, and the tornado may have gotten mistakenly placed in a different part of town on these maps. If you see a tornado track that looks out of place, feel free to [e-mail](#) us.
3. For small, short-lived tornadoes, only one latitude/longitude pair may have been given in the NWS database (rather than one pair for the start point of the tornado track and another pair for the end point). In these cases, a southwest-to-northeast movement of the tornado was assumed, since that is the most common direction of travel for tornadoes. If you spot a tornado whose track is misplotted, [e-mail](#) us.
4. Occasionally, in the NWS database, it appeared that the latitude/longitude pair given for a tornado's location was simply the latitude/longitude for that county's county seat, or largest town, even if the tornado actually occurred in another part of the county. If the tornado was not listed in Grazulis, then I had no choice but to plot the tornado where the NWS latitude/longitude pair specified. This may partially explain why some county seats have a seemingly disproportionate number of tornadoes near them on these maps. Again, you may [e-mail](#) us if you notice any

discrepancies.

5. There were a few tornadoes in the NWS database that were obviously coded with incorrect latitude/longitude pairs. If the tornado was listed in Grazulis, I used his location. If not, the tornado was not plotted. (This was very rare.)
6. On the maps, towns are represented by a small black dot. The dot is placed at the town's downtown. So, just because a tornado path on the map misses the dot representing the town, that doesn't necessarily mean the tornado completely missed the town. For instance, Fort Wayne covers many square miles, and several tornado tracks shown on the map did indeed cross into the city limits, even though they miss the black dot on the map representing (downtown) Fort Wayne.
7. The F-Scale ranking given to each tornado represents the maximum strength the tornado achieved anywhere along its path...not necessarily in the county in which you're interested. For example, the Monticello Tornado, which traveled from Warren County to Lagrange County, was rated as an F4, and is thus colored red and annotated as an F4 on each county map where it is plotted. However, the tornado only reached F4 strength in White County. So, if you are looking at the map of Kosciusko County, you will see that the tornado is colored red and listed as an F4...even though it wasn't actually an F4 in Kosciusko County (it *was* an F4 earlier in its life).
8. For ease in plotting, each tornado track was drawn as a continuous, and usually straight, line, with a constant width. In reality, many tornadoes skip, have small changes in direction, and vary in width during their lifetime.
9. For whatever reason, 27 of the tornadoes plotted on these maps did not have an F-scale ranking applied to them in the NWS database (and were not listed in Grazulis). If you have any knowledge of the kind of damage that these tornadoes produced, you're welcome to [e-mail](#) us with the details. These tornadoes are colored in black on the maps, and the F-scale is "F?".

Also...

Keep in mind that these maps only depict tornadoes -- not severe thunderstorms or downbursts, which can occasionally cause damage equal in severity to a small tornado.

Please view this list of [discrepancies](#) found in the historical database.