

# Actuarial Weather Extremes Series

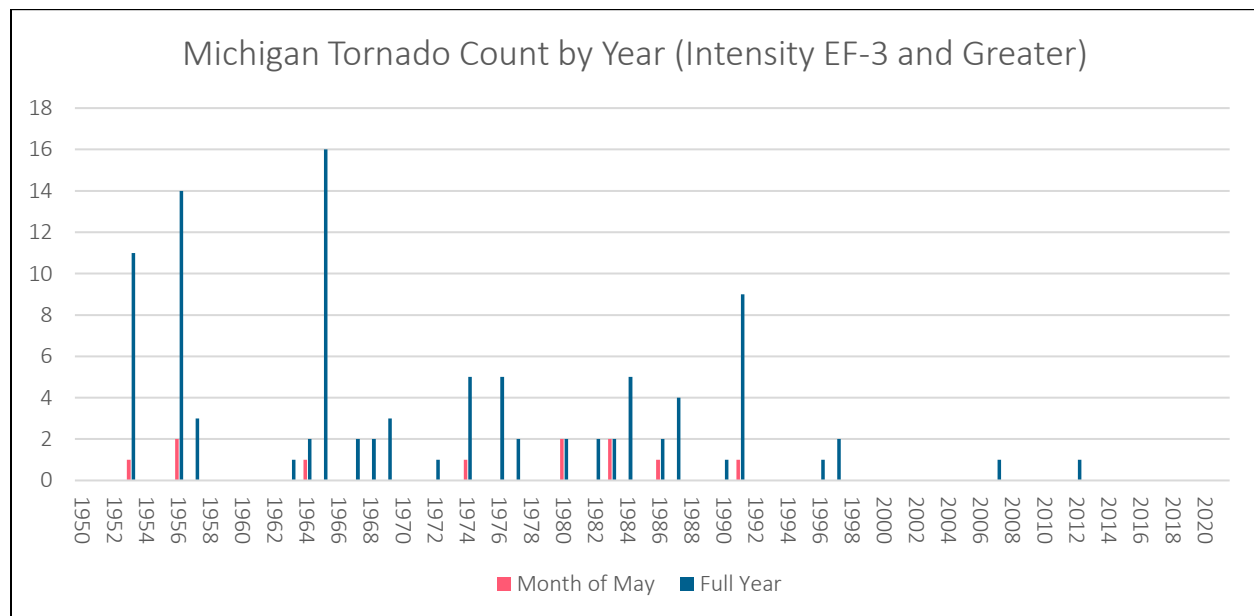
## Michigan EF-3 Tornado: May 20, 2022

**Author:** Matthew Self, ASA  
Ascension Data Science Institute

### Event Description

On May 20, 2022, an EF-3 tornado hit Gaylord, Michigan and caused 2 fatalities and 44 injuries, according to the National Weather Service Damage Survey [2]. The supercell thunderstorm that produced the destructive tornado also produced damaging wind and hail up to 3 inches in diameter [3]. According to data from the National Center for Environmental Information, this tornado was the first EF-3+ tornado in Michigan since 2012 and first EF-3+ tornado in Michigan in May since 1991 [1].

The supercell thunderstorm was supported by atmospheric instability from the northward movement of a large, warm air mass. The Average Daily Maximum temperature for May 16-20 was 66 degrees Fahrenheit; on May 21, the Maximum Temperature reached 84 degrees, a significant increase in temperature from the previous days [4].



Data source: NOAA National Center for Environmental Information.

#### Caveat and Disclaimer

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As seen in the graph above, such a strong tornado event is unusual in Michigan in any part of the year and is extremely unusual in the month of May.

### Sources

- [1] Source: NOAA National Center for Environmental Information
  - Data: 1950-2021 tornadoes
  - [https://www.ncdc.noaa.gov/stormevents/listevents.jsp?tornfilter=2&sort=DT&statefips=26%2CMICHIGAN&eventType=%28C%29+Tornado&beginDate\\_yyyy=1950&beginDate\\_mm=01&beginDate\\_dd=01&endDate\\_yyyy=2022&endDate\\_mm=02&endDate\\_dd=28](https://www.ncdc.noaa.gov/stormevents/listevents.jsp?tornfilter=2&sort=DT&statefips=26%2CMICHIGAN&eventType=%28C%29+Tornado&beginDate_yyyy=1950&beginDate_mm=01&beginDate_dd=01&endDate_yyyy=2022&endDate_mm=02&endDate_dd=28)
  - Date Accessed: 5/25/2022
- [2] Source: National Weather Service, Gaylord
  - Data: May 20, 2022, tornado and hail
  - <https://www.weather.gov/apx/severe-2022May20>
  - Date Accessed: 5/25/2022
- [3] Source: SPC Reports
  - Data: Reported hail sizes
  - [https://www.spc.noaa.gov/climo/reports/220520\\_rpts.html](https://www.spc.noaa.gov/climo/reports/220520_rpts.html)
  - Date Accessed: 5/25/2022
- [4] Source: Global Historical Climatology Network
  - <https://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USC00203096/detail>
  - Date Accessed: 5/25/2022
  - Data: Daily temperature data for the Gaylord, MI station

### Further Reading

- <https://www.weather.gov/apx/severe-2022May20>

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