

Actuarial Weather Extremes Series

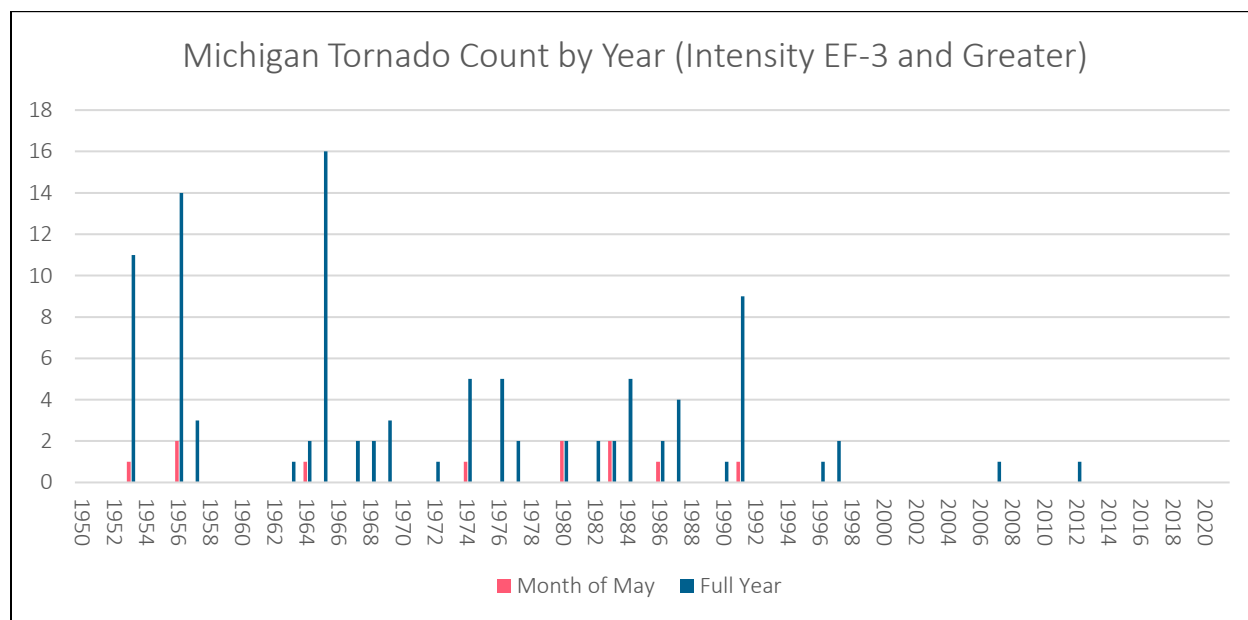
Michigan EF-3 Tornado: May 20, 2022

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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
 - 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
 - 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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