



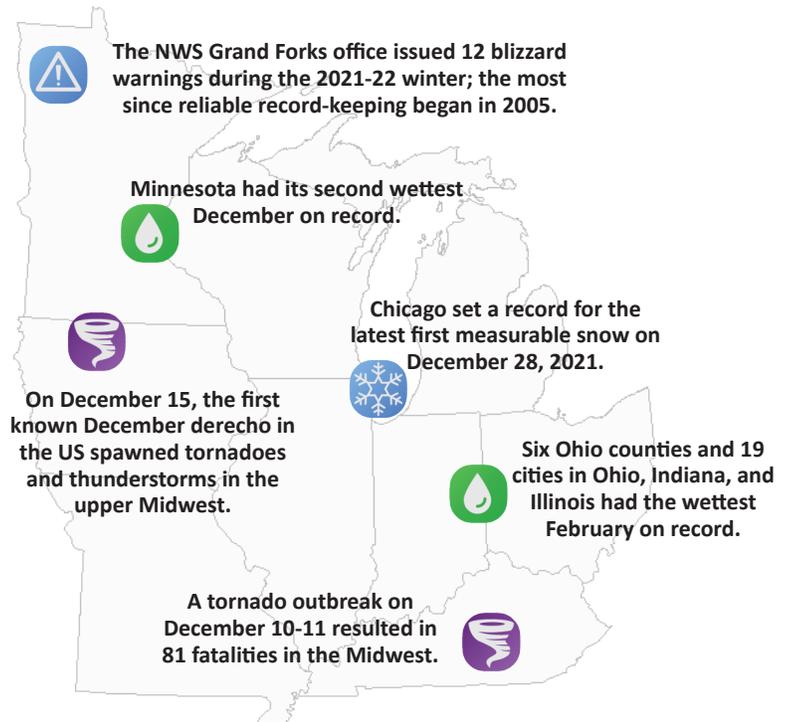
Midwest Significant Events – December 2021 – February 2022

A severe weather outbreak on December 10-11th affected Illinois, Indiana, Kentucky, Missouri, and Ohio. The National Weather Service confirmed 33 tornadoes with dozens of unconfirmed storms. Kentucky was hard-hit by the Mayfield tornado, with 190 mph peak winds and a path length of 166 miles.

On December 15th, a historic severe weather event produced Minnesota's first known December tornadoes and broke Iowa's all-time, single-day tornado record. Severe thunderstorms also affected Illinois, Missouri, and Wisconsin.

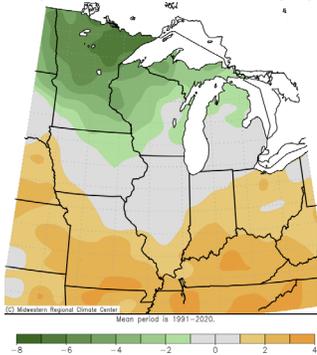
Record-setting December warmth led to 1,015 daily maximum temperature records, multiple severe weather events, and delayed snowfall.

Throughout February, a persistent atmospheric pattern brought frequent storms across the lower Midwest and extreme upper Midwest, with a lack of precipitation in between. A large swath from southern Missouri through the Ohio River Valley had up to 300 percent of normal precipitation.



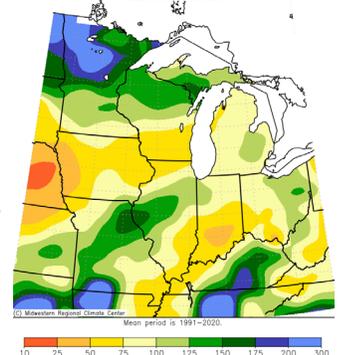
Regional Climate Overview – December 2021 – February 2022

Winter Temperature Departure from Normal (°F)

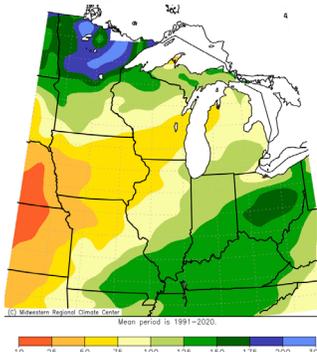


Winter temperatures had a north-south divide. However, a month-to-month look showed a tale of two winters, with extreme warmth in December followed by two months of lingering cold. The Midwest had the 3rd warmest December on record since 1895. All locations had above-normal warmth, with five states (Illinois, Indiana, Iowa, Missouri, and Ohio) ranked in the top three for the warmest December. All states had below-normal temperatures during January and February, except Kentucky which had a slightly above-normal February.

Winter Snowfall % of Normal



Winter Precipitation % of Normal



Winter precipitation had a distinct geographic pattern, likely related to La Nina conditions, that persisted for much of the winter. The southeast and extreme northern stretches of the Midwest had above-normal precipitation. In contrast, below-normal precipitation was widespread from Iowa and northern Missouri to the northeast into Michigan, expanding drought in this region. Iowa had the 15th driest winter on record. Conversely, Indiana, Kentucky, and Ohio were in the top 20 wettest winters. Minnesota had the 11th wettest winter on record.

Winter snowfall was mixed across the region. An above-normal number of fast-moving "clipper" systems led to higher snowfall across northern Minnesota. Throughout Kentucky, several rounds of impactful snow pushed seasonal totals into the top five on record. While a narrow band through Missouri and Illinois had recurring February snowstorms and above-normal seasonal totals, snowfall deficits ranged from 25-75 percent of normal across Iowa and southern Wisconsin, and also from southeast Missouri to western Ohio.



Regional Impacts – December 2021 – February 2022

Transportation

Multiple winter storms throughout February resulted in severe roadway impacts. A storm on February 3-4 dropped 8-15 inches of snow from Missouri to Michigan, with snow falling so heavily that an excessive number of traffic accidents led to road closures on portions of Interstates 39, 74, 55, and 57 in central Illinois. Another storm on February 16-18 laid several inches of snow atop of ice accumulation, resulting in a



Multi-vehicle pileup on I-39 (credit: Illinois Department of Transportation)

[100-car pileup](#) on Interstate 39 north of Bloomington-Normal, Illinois that closed the road for 2.5 days. In northern Indiana, a fatal weather-induced [crash on Interstate 65](#) left drivers stranded overnight.

Recreation

Extremely warm December temperatures caused ski resorts in [Ohio](#) and [Indiana](#) to delay opening by about one month. This was due to a lack of natural snow and the inability to make and maintain artificial snow. By mid-January, temperatures cooled enough to support an abundant artificial snowpack, and all resorts were able to open.

Infrastructure

An increased number of water main breaks were reported in Illinois and eastern Wisconsin. Cold temperatures paired with a lack of insulating snow allowed deep soil frost.



Aerial photo of damage in Dawson Springs, Kentucky where over 1500 structures were damaged or destroyed county-wide and 15 fatalities were reported. (photo credit: Chris Conley)

Storm Damage

December 10-11 was the deadliest December tornado outbreak in history, killing 87 people (81 in the Midwest alone) and causing [\\$3.9 billion in damages](#). The December 15th derecho caused [\\$1.8 billion in losses](#) and resulted in at least one fatality.

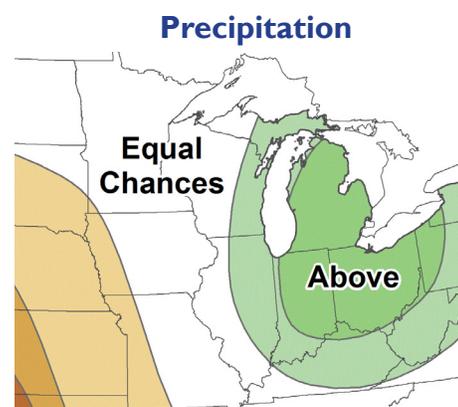
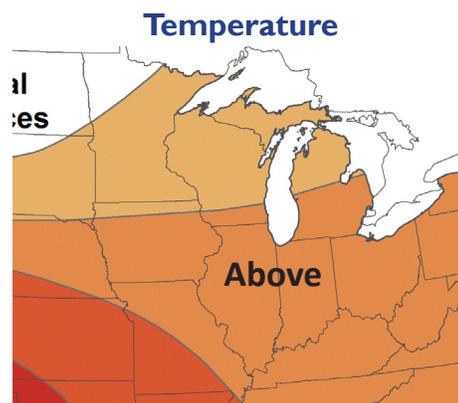
Regional Outlook – April – June 2022

NOAA forecasters [are predicting](#) an increased chance of above-normal temperatures across nearly the entire Midwest, with equal chances of above-, below-, or near-normal temperatures in northwest Minnesota.

The precipitation outlook favors increased chances of above-normal precipitation in the eastern Midwest, with the highest chances centered over Ohio, Indiana, and Michigan. Equal chances of above-, below-, or near-normal precipitation are projected along and west of the Mississippi River. Western Iowa and western Missouri have a chance of below-normal precipitation.

The [seasonal drought outlook](#) predicts drought conditions will improve across the upper Midwest, except in isolated areas in and around Iowa where drought is likely to persist.

There is a minor [flood risk](#) across most of the Midwest, with a moderate flood risk in the Wabash River Basin (Indiana and eastern Illinois) and a major flood risk in the Red River Basin (northwest Minnesota).



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