



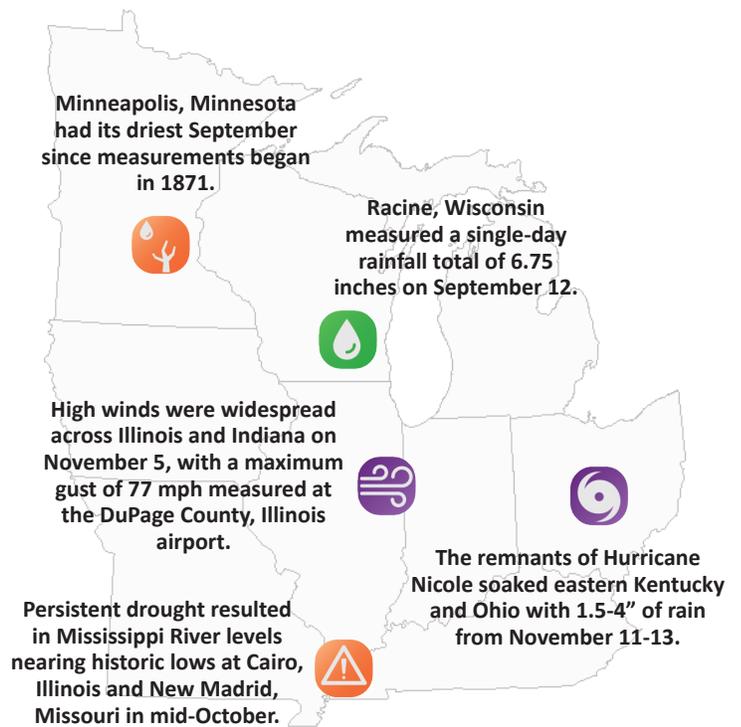
### Midwest Significant Events – September - November 2022

A slow-moving low pressure system dropped 4-7 inches of rain across southern Wisconsin and northern Illinois from September 10-12.

A warm and humid air mass settled across the region September 19-22 resulting in over 315 daily high temperature records. Daytime highs exceeded 90°F as far north as central Minnesota, with triple-digit temperatures in Missouri and Iowa.

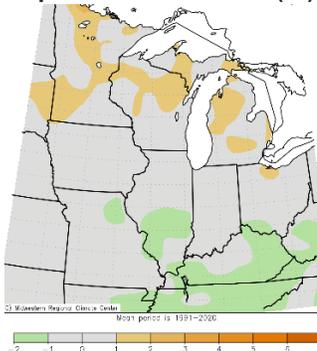
Mild temperatures and large precipitation deficits led to drought re-intensification in September that persisted through the fall. Conditions peaked in late October when 82 percent of the region was denoted as abnormally dry or in drought.

Record warmth blanketed the region in early November. Daily high temperatures were 20-25°F above normal across the upper Midwest from November 1-3 and across the central Midwest November 9-10. Over 1,000 daily high temperature records were set November 1-10. Intense storms traversed Minnesota November 8-12, bringing [record rainfall and humidity](#). Minneapolis had its latest 60°F dew point on record.



### Regional Climate Overview – September - November 2022

#### Fall Temperature Departure from Normal (°F)

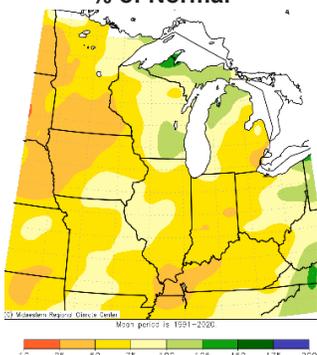


Average fall temperatures were 1-2°F above normal across the upper Midwest, near normal across the central Midwest, and 1-2°F below normal across the lower Midwest. This pattern was generally consistent across the three fall months

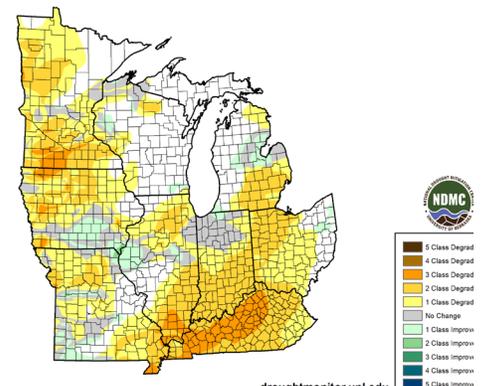
Most of the Midwest had less than 75 percent of normal precipitation for fall, with the south-central Midwest, western Iowa, and southern Minnesota accumulating less than 50 percent of normal. Drier-than-normal precipitation was widespread across the region in September and October. In November, precipitation increased in the northwest while remaining dry in the southeast. Kentucky had its 9th driest fall since 1895, while Indiana and Minnesota had the 10th driest. The Midwest recorded its 15th driest fall since 1895.

The Midwest drought roller coaster that started mid-year continued throughout the fall. In late summer, the rapid-onset drought that initiated months prior appeared to be in a recovery phase, but persistent dryness paired with warm conditions in early fall reversed that trend. Drought and abnormal dryness affected 28 percent of the Midwest in early September, growing in coverage to 73 percent of the Midwest affected by late November. By season's end, drought was present in all nine states, with the most extreme drought in southern Minnesota, northwest Iowa, and extreme southern Illinois.

#### Fall Precipitation % of Normal



#### Midwest Drought Change from Sep 6 to Nov 29



## Regional Impacts – September - November 2022

### Agriculture and Forests

Fall harvest was generally uneventful across the Midwest and benefited from drier-than-normal conditions. Crops dried down in the fields quickly, reducing the need for artificial drying. However, in some locations over-drying / rapid drying resulted in soybean shattering during harvest. There were numerous reports of combine fires, [grassland fires](#), and [forest fires](#) fueled by the drought.

Burn bans were common region wide.



Crop field fire in Ohio (Credit: Aaron Wilson)

Dry conditions reduced forage quality, limited soil moisture recharge, and slowed winter wheat emergence. However, agritourism benefited from the mild and dry weather this fall by creating favorable conditions for apple and pumpkin picking, and corn mazes.

With limited soil moisture recharge during the fall, there was growing concern in the western region about the upcoming spring soil conditions. In southwest Minnesota, soil moisture at the end of the growing season was [roughly 30% short](#) compared to historical averages.

### Streamflows and Navigation

Widespread drought stress across the central US resulted in record and near-record low flows on the lower Mississippi River, the Ohio River, and tributaries.

Reduced flows severely affected



*Extremely low flows on the Mississippi River allowed a rock formation typically accessible only by boat to be [reachable by foot](#). (credit: Missouri Dept. of Conservation)*

navigation, limiting the ability to move grain, fertilizer, and other goods at a critical time of the year.

The U.S. Army Corps of Engineers incurred increased costs associated with river dredging to keep river navigation channels open.

## Regional Outlook – January - March 2023

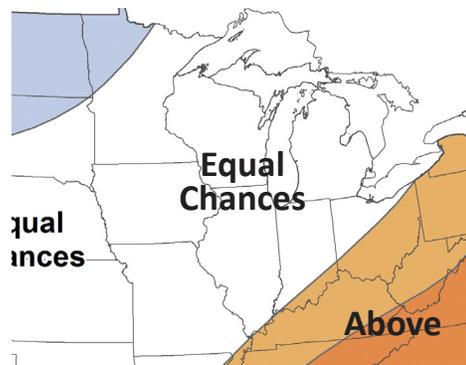
NOAA forecasters [are predicting](#) equal chances of above-, below-, or near-normal temperatures for most of the Midwest, with below-normal temperatures more likely in the far northwestern area and above-normal temperatures more likely in the southeastern region.

The precipitation outlook favors above-normal precipitation for the majority of the Midwest. Only the far western portion of the Midwest has equal chances of above-, below-, or near-normal precipitation.

[La Niña](#) conditions are expected to fade by early spring.

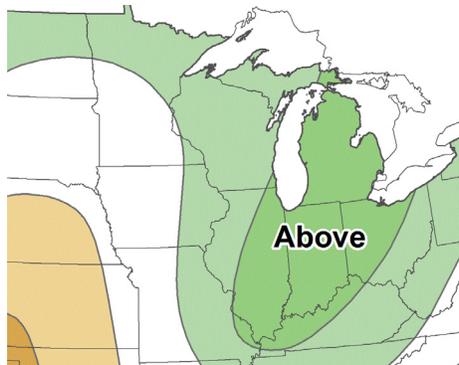
### Temperature Outlook

Jan-Feb-Mar 2023



### Precipitation Outlook

Jan-Feb-Mar 2023



## Midwest Region Partners

[Midwestern Regional Climate Center](#)

[American Association of State Climatologists](#)

[National Oceanic and Atmospheric Administration](#)

[NWS Climate Prediction Center](#)

[National Centers for Environmental Information](#)

[National Weather Service Central Region](#)

[North Central River Forecast Center](#)

[Ohio River Forecast Center](#)

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