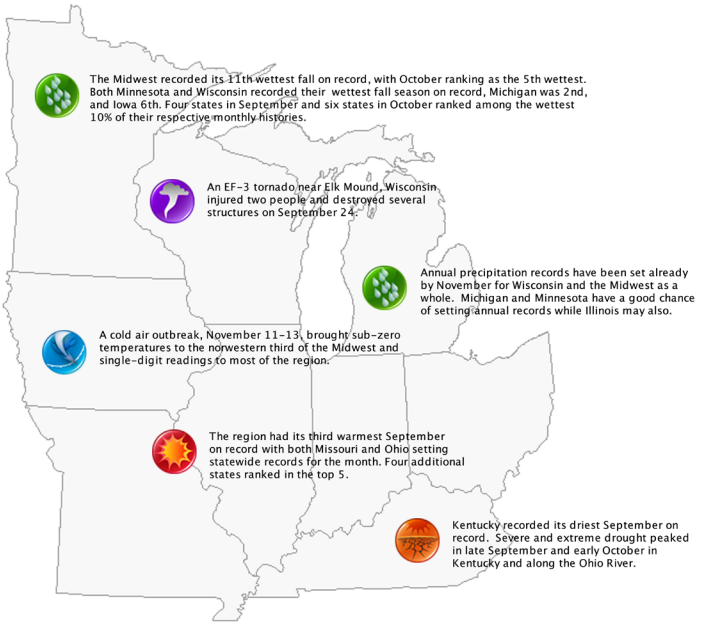
# Quarterly Climate Impacts and Outlook

# Midwest Region

**December 2019**

## National – *Significant Events for September–November 2019*

### Highlights for the Midwest




The Midwest ranked as the 11th wettest fall and 5th wettest October and had record January–November precipitation. Both September and October had multiple states among the wettest 10% of their respective histories.

Both the Midwest and Wisconsin set calendar-year precipitation records by the end of November. Minnesota, Michigan, and possibly Illinois could also set calendar-year precipitation records in 2019.

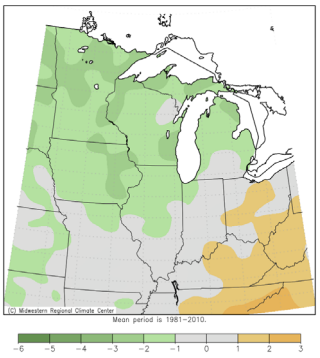
September was quite warm for the region, ranking as 3rd warmest on record for the region. Kentucky, set a record for driest and also 2nd hottest September.

The heat and dryness in Kentucky, and in neighboring states along the Ohio River, led to severe and extreme drought in late September and early October.

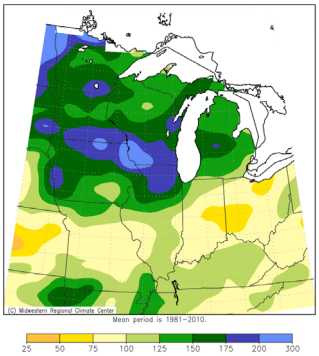
Tornadoes in the region included an EF-3 storm near Elk Mound, Wisconsin, which injured two people and destroyed structures. A pre-Halloween snowstorm stretched from northern Missouri to southern Wisconsin. The upper Midwest was hit with heavy snow at the start of the Thanksgiving holiday. Heavy rains in the southern Midwest and more snow in the upper Midwest complicated travel as November, and the holiday weekend, came to an end.

## Regional – *Climate Overview for September–November 2019*

### Fall Temperature Departure from Normal




### Fall Precipitation % of Normal



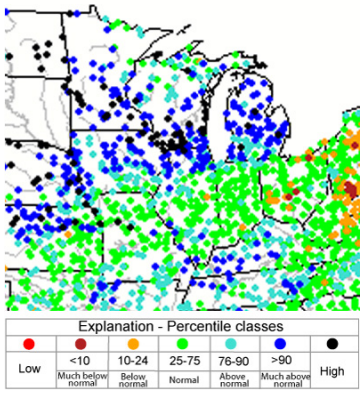

Temperatures in the region averaged below normal in the upper Midwest and above normal further southeast. The individual months were variable, with a warm September (3rd warmest) largely offset by a cool November. October temperatures were below normal along the western third of the region and above normal to the southeast. September temperatures were record warm in Missouri and Ohio and ranked top-5 in four additional states.

The continued wetness of 2019 persisted into the fall. September was wet in the upper Midwest, with Iowa, Minnesota, Wisconsin, and Michigan all ranking among the wettest 10% of their histories. October was wet across the region, ranking 5th wettest, with six states in the top 10. November was drier, with only Kentucky recording above-normal precipitation.

Year-to-date precipitation ranked among the top 10 in all nine states, with new records in Wisconsin, and the Midwest. In fact, Wisconsin and the Midwest have already exceeded their calendar-year records, with a month remaining in 2019. Wisconsin's record dated from 1938 and the Midwest's from just last year. Minnesota and Michigan are about an inch from their calendar year records, and Illinois is a bit over 3 inches away.

Streamflows in the Midwest, especially in the northern half of the region, were running high and were at or near record values for this time of year. Flooding has eased somewhat, but soils have adequate to excess moisture in many parts of the region.

### 7-Day Streamflow

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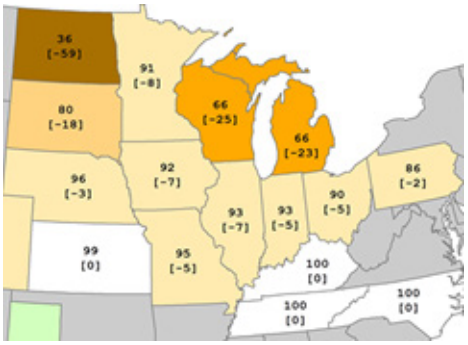
## Regional Impacts – *September–November 2019*

### Agriculture

Wet spring conditions led to a delayed start to the 2019 growing season in the Midwest. With delayed planting and near normal summer heat, crops remained behind their usual schedule, and maturity was pushed later into the fall. Fall wetness in areas that were already on the wet side, particularly in the upper Midwest, led to harvest delays that put many crops well behind the 5-year averages for harvest progress. The growing season came to an end with near median first freeze dates. Additionally, there were numerous reports of equipment stuck in fields and disease issues related to wet conditions this fall.

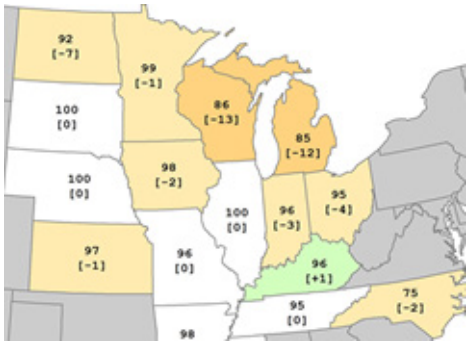



Corn harvest progress [departure from 5-year average] as of December 1, 2019.

Soybean harvest was delayed compared to the 5-year average, despite much of the crop being harvested by the end of November. Wisconsin and Michigan remained the furthest behind at more than 10%.

Corn harvest was slow, with most of the Midwest behind by 5%–10% while Wisconsin and Michigan were behind by up to 25% compared to the 5-year average. There are likely to be significant portions of the crop that will remain unharvested until spring.

Sugar beet harvest was also delayed, with about 25% to 30% of the crop unable to be harvested due to delayed production and then frozen soils.




Soybean harvest progress [departure from 5-year average] as of December 1, 2019.

Although damaging for the sugar beet crop, the frozen soils did allow harvest to resume where wet soils had prevented field access. With frozen ground, large equipment could return to the fields without getting stuck or causing compaction. The cold conditions also shut down some disease issues that had emerged.

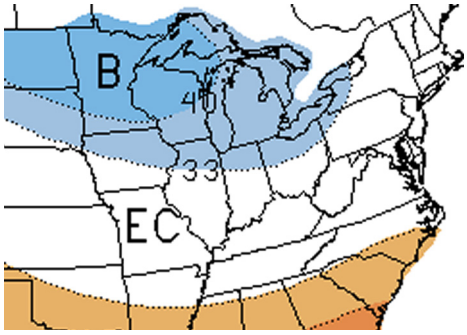
## Regional Outlook – *January–March 2020*

The temperature outlook for January–March 2020 shows equal chances of above-, below- and near normal for the southern half of the Midwest and increased chances of below-normal in the northern half of the region. The highest probabilities of below-normal temperatures include Upper Michigan, northern Wisconsin, and most of Minnesota.

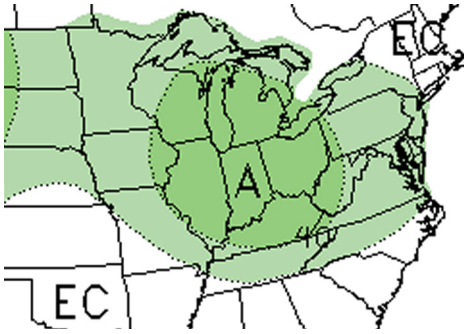
The January–March 2020 precipitation outlook calls for increased chances of above-normal for nearly all of the Midwest. Only southwestern Missouri has equal chances of above-, below- and near normal precipitation. The highest chances of above-normal precipitation are in the eastern two-thirds of the region.

The current wet soils and high streamflows, along with the increased chances of above-normal winter precipitation, warrant elevated concern for potential flooding through spring. Spring flooding conditions are highly dependent on snow pack, temperature, river ice and rainfall.

### Temperature




### Precipitation




A = Above normal N = Normal
B = Below normal EC = Equal chances

## 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
- National Drought Mitigation Center
- National Integrated Drought Information System
- USDA Midwest Climate Hub

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