

Midwest Ag-Focus Climate Outlook

Main Points

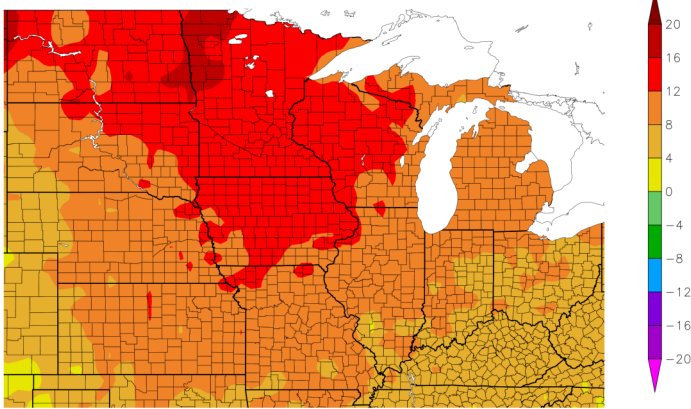


- ◆ Drought conditions continue and have resurged across the Corn Belt.
- ◆ Warm winter temperatures have been pervasive and look to continue into March.
- ◆ Winter precipitation helped soil moisture in some areas, as soils have been mostly unfrozen.
- ◆ Early spring perennial activity is reaching the southern Corn Belt.



Current Conditions

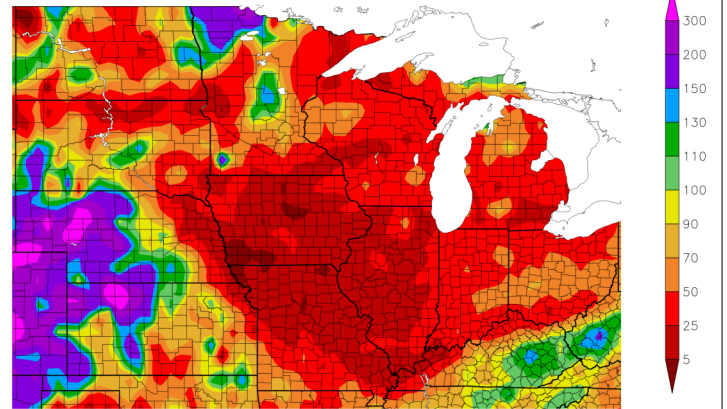
Departure from Normal Temperature (F)
1/31/2024 – 2/29/2024



Generated 3/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
1/31/2024 – 2/29/2024



Generated 3/1/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

As climatological winter (December 1- February 29) draws to a close, the north central US has experienced a very warm winter with a few, brief cold periods and one severe cold episode in mid-January. The overall warmth continued into February, when the whole region ranged from at least 4°F above-average to over 16°F above-average along the Red River Valley. For much of the region, this winter will be the warmest—or very near the warmest—on record. This warmth is due in part to a lack of snow in the north (not pictured) where there is very little snow on the ground currently and throughout the winter. Overall, the winter has been relatively wet, with rains in December and some larger snows in some areas; but, the month of February has seen an overall return to drier-than-average conditions over most of the area, except for parts of the Plains, helping to start drying soils again.

Images from High Plains Regional Climate Center (HPRCC), [ACIS Climate Maps](#). Generated: 3/1/2024.

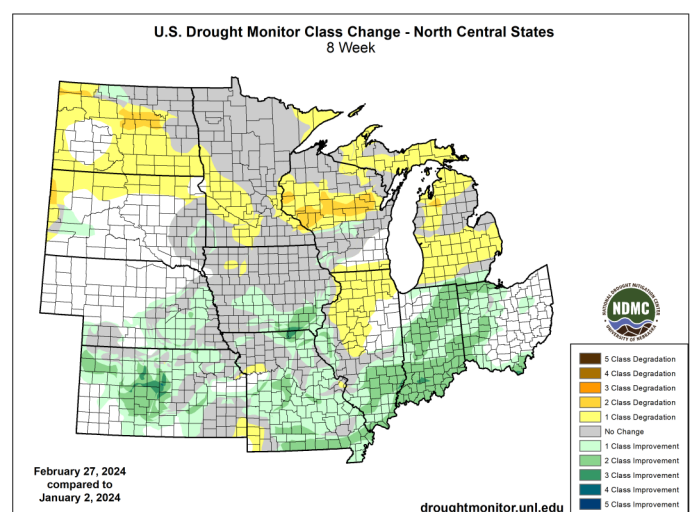
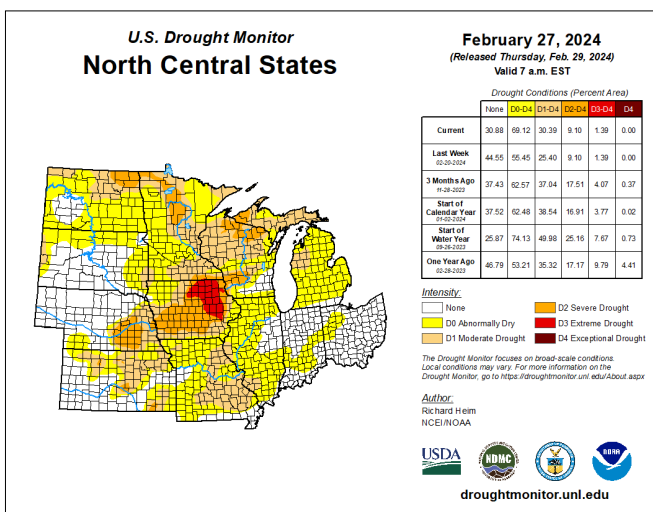
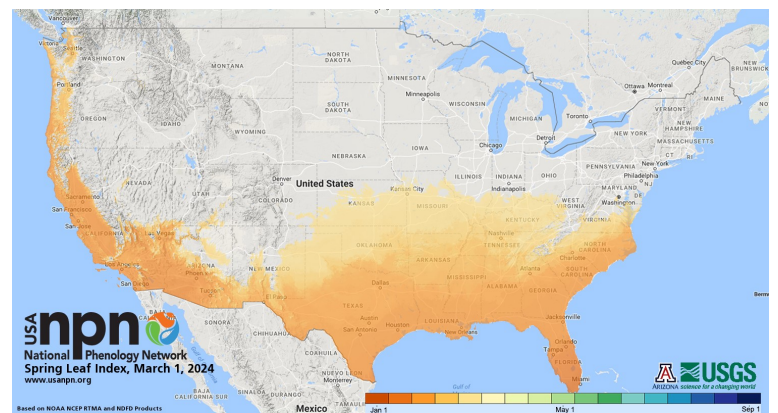
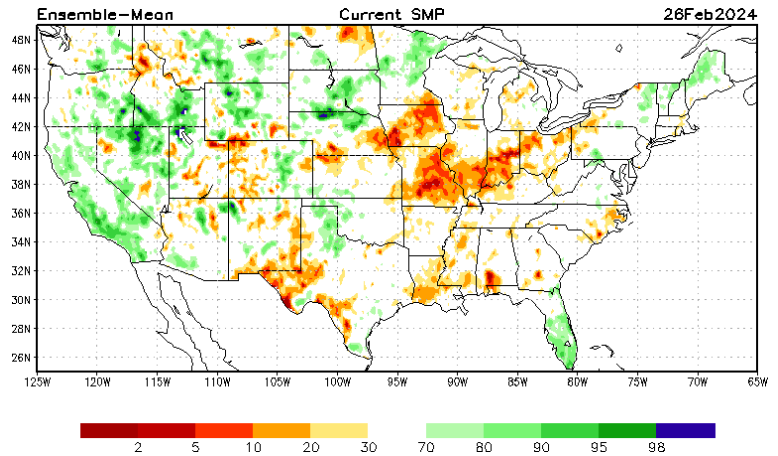
Impacts



Drought continues to be a major topic of concern for agriculture in the region. The US Drought Monitor continues to show severe drought areas with major longer-term precipitation deficits centered around Iowa with larger areas of lesser severity. Iowa has had at least D1-level drought somewhere in the state continuously since mid-2020. The eastern Corn Belt received enough precipitation to help soil moisture during the winter, though there are still concerns about the deeper profile. The warm winter helped to some extent, keeping soils unfrozen or marginally frozen and allowing rain and melting snow to enter the soil profile; this effect added a few inches of water in some areas. Soils continue to only be marginally frozen over most of the region. Unfortunately, precipitation amounts were not enough in many places to alleviate dryness concerns. The warmth has been significant enough that winter evaporation from the soil surface has been a concern. Typically, winter soil moisture loss is not a large issue. Exact amounts are hard to estimate, but up to an inch of soil moisture may have been lost to evaporation in February over the southern half of the region with somewhat lesser amounts to the north.

Overall, crop impacts are limited. There was possible fruit crop damage from the extreme cold in January. Cover crops appear to have managed the winter well. Concerns exist for perennials, which are likely beginning to break dormancy well before climatological last freezes. Check the dates of last freezes for your county at mrcc.purdue.edu/freeze/freezedatetool.

Fire concerns across the region are also very apparent. Burning should be monitored, avoiding days with higher fire concerns. On Red Flag days, producers should monitor inadvertent sparks or other flame sources.



Maps Generated by the [National Drought Mitigation Center](http://www.nationaldroughtmitigationcenter.org), the [Midwestern Regional Climate Center](http://www.mrcc.purdue.edu) [cli-MATE](http://cli-mate.org) system.



For more information, please visit:
<https://www.climatehubs.usda.gov/hubs/midwest>

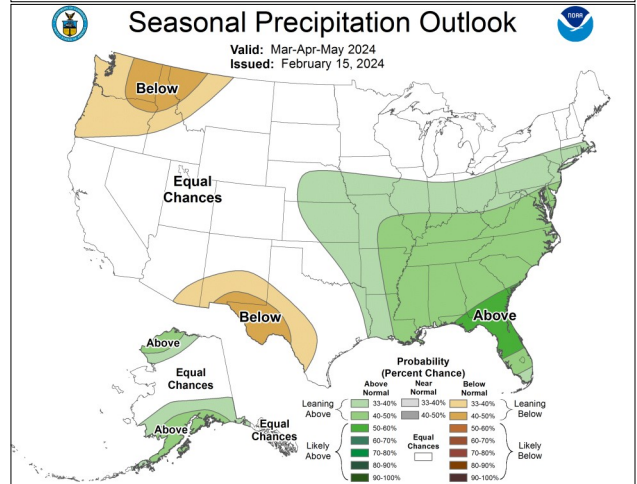
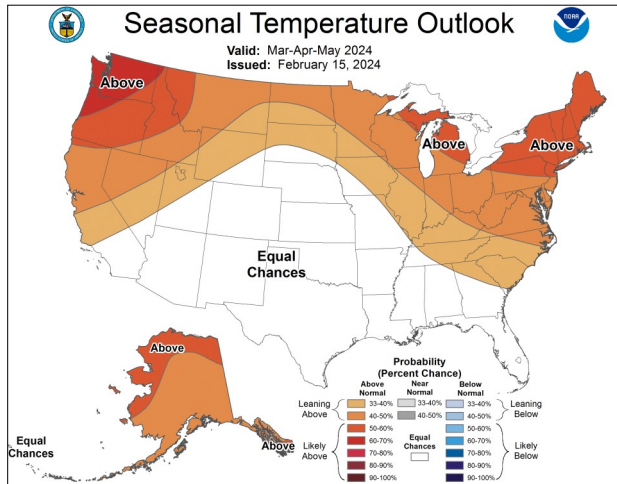
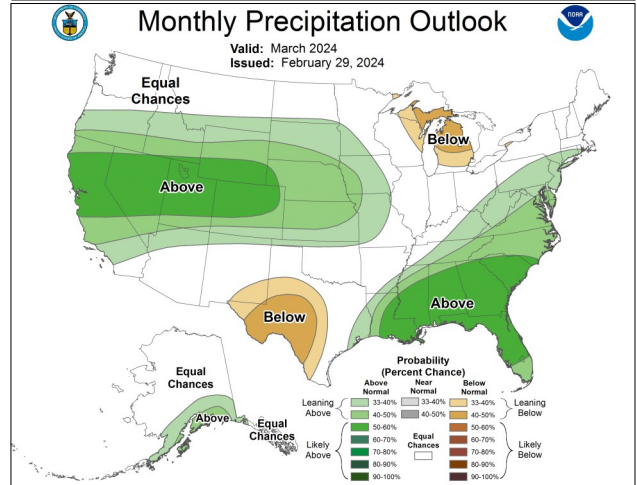
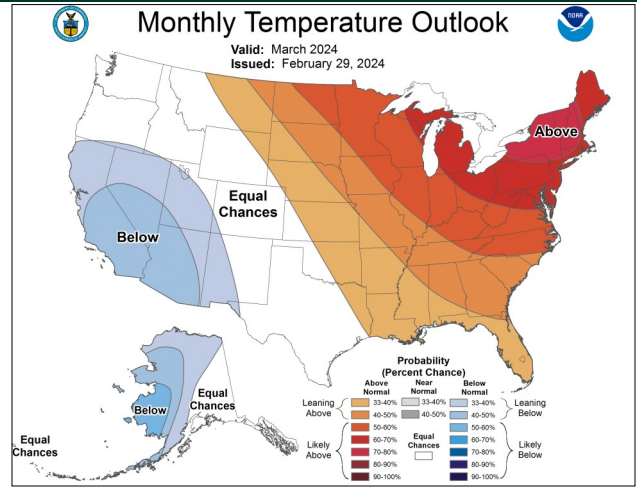
Outlook



The updated outlooks for March point to a continuation of conditions across the region. They lean towards warmer-than-average conditions throughout most of the region. For this time of year, these outlooks show higher-than-normal certainty. Late March has less confidence in overall warmth. Precipitation outlooks show uncertainty. Outlooks out to mid-month hint at wetter conditions over nearly the whole area. Only the central Plains have increased chances of wetness in March. While precipitation should continue, there appears to be minimal drought reduction in the coming month, given overall uncertainty in precipitation and the amounts needed to greatly improve conditions.

The outlook's impacts on agriculture are mixed. Soil wetness will probably not cause delays in spring field access, but drought improvement seems limited and the warmth with the higher sun angle will start to warm soils—especially drier soils—quickly.

As mentioned in the Impacts section above, there is concern about early dormancy break and potential subsequent spring freeze. At this point, there are no specific indications on last spring freeze. You can explore your local freeze date trends here mrcc.purdue.edu/freeze/freezedatetool.html.



Outlooks provided by the Climate Prediction Center.

Partners and Contributors



- [United States Department of Agriculture \(USDA\)](http://United States Department of Agriculture (USDA))
- [National Oceanic and Atmospheric Administration \(NOAA\)](http://National Oceanic and Atmospheric Administration (NOAA))
- [Climate Prediction Center \(CPC\)](http://Climate Prediction Center (CPC))
- [National Weather Service \(NWS\)](http://National Weather Service (NWS))
- [National Center for Environmental Information \(NCEI\)](http://National Center for Environmental Information (NCEI))

- [National Drought Mitigation Center \(NDMC\)](http://National Drought Mitigation Center (NDMC))
- [National Integrated Drought Information System \(NIDIS\)](http://National Integrated Drought Information System (NIDIS))
- [Midwestern Regional Climate Center \(MRCC\)](http://Midwestern Regional Climate Center (MRCC))
- Midwest State Climatologists
- [High Plains Regional Climate Center \(HPRCC\)](http://High Plains Regional Climate Center (HPRCC))



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