



Midwest Ag-Focus Climate Outlook

January 10, 2025

Main Points

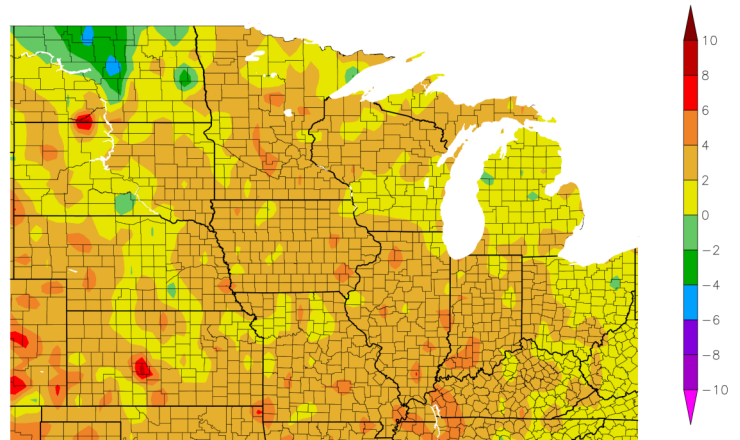
- Cooler-than-normal conditions may persist throughout January.
- Seasonal outlooks indicate uncertainty in temperature trends, with eastern portions of the Midwest leaning towards greater-than-normal precipitation.
- The upper Midwest is lagging in snowfall (compared to normal to-date accumulation), while portions of the lower Midwest has experienced 200 to 300% of normal to-date snowfall
- Frost depths are developing, with up to 2 feet in northern areas.

Current Conditions

Over the past 30-days, precipitation (as percent of normal) was widely variable across the region; however, the departure from normal precipitation was generally 1.5 inches across the region. Due to less precipitation falling during the winter season, small changes in precipitation quantity can account for large changes in proportion of normal precipitation received. Drier-than-normal conditions are most evident in the southwest Corn Belt, where less than 0.1 inch of precipitation has fallen in the last month. A band of wetter-than-normal conditions fell across portions of the southeast and eastern Corn Belt, with the highest precipitation occurring in the tri-state region of Missouri, Illinois, and Kentucky, with 7+ inches of liquid precipitation.

Temperatures over the past 30 days were 2 to 6 degrees (°F) above normal across the Corn Belt. Small pockets experienced temperatures 6 to 9 degrees (°F) above normal, and a pocket in the northern Plains experienced slightly cooler than normal temperatures.

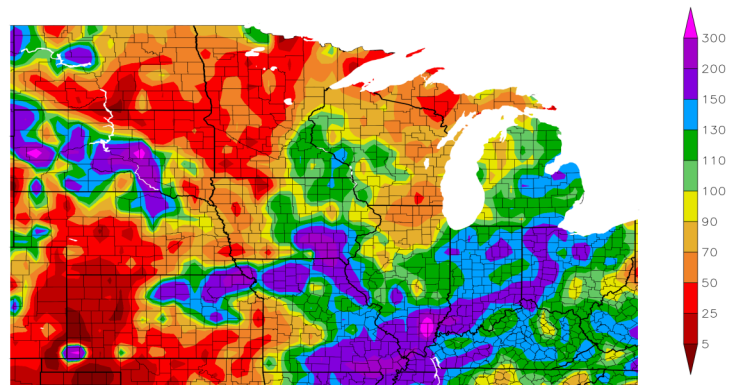
Departure from Normal Temperature (F)
12/11/2024 - 1/9/2025



Generated 1/10/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
12/11/2024 - 1/9/2025



Generated 1/10/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

Images from High Plains Regional Climate Center (HPRCC), Online Data Services: [ACIS Climate Maps](https://climatehubs.usda.gov/hubs/midwest). Generated: 01/10/2025.

Despite 30-day trends indicating warmer-than-normal temperatures, communities across the upper Midwest are bundling up this week as Arctic cold air moved into the region, dropping temperatures along the way. Recent cold is still offset by the very warm conditions around Christmas across the region.

Impacts

Drought

Currently, most of the region is classified as abnormally dry (23%) or in moderate drought (33%). Throughout the region, drought-free pockets exist in nearly every state. Severe drought conditions exist in pockets of Michigan and Minnesota, with the western portions of western North Dakota through western Nebraska experiencing extreme drought conditions.

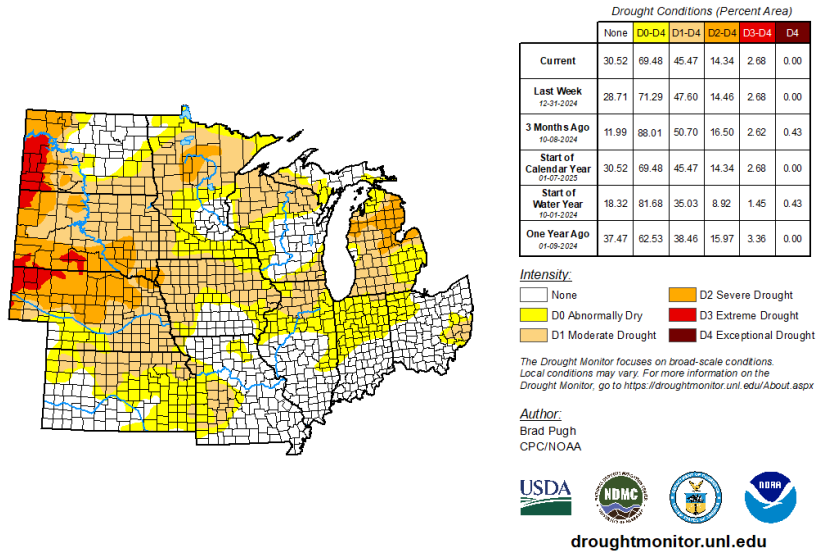
In comparison to last month, there has been little change in drought conditions across the region (which is normal in winter). Small pockets of Wisconsin, Illinois, and Nebraska have noted a one class degradation. One-class improvements occurred mainly in Indiana and Ohio with small pockets of improvements throughout the region. Frozen soils and limited precipitation are slowing improvements.

Snow

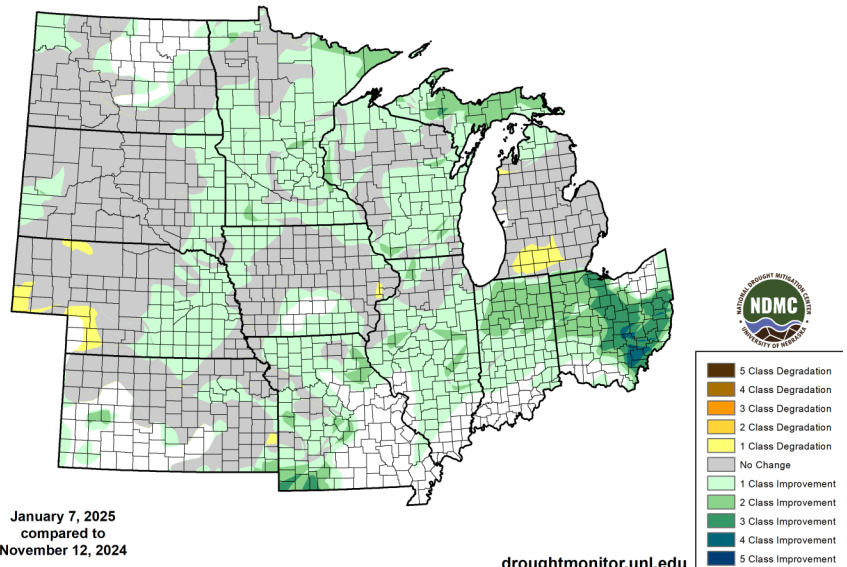
Over the first week of January, winter weather in the Plains and portions of the Midwest brought heavy snowfall, sleet, and ice. Despite these conditions, snowfall throughout the upper Midwest is below average, with much of the area having received more than 50% of the average snowfall for this time of the year. Pockets of Minnesota, South Dakota, Iowa, and Nebraska have received less than 25% of normal snowfall. In south central Wisconsin, Madison has received 9.4 inches of snowfall to date (compared to the normal season to-date of 18.2 inches). Similarly, in northern Wisconsin, Hayward has received roughly half of the amount of snowfall typical for this time of year. South Dakota stations have seen greater than 10-inch deficits, and Duluth has an up to 20-inch deficit. In contrast, portions of the lower Midwest have received above-normal snowfall to date, with pockets of snowfall in Kansas stretching to Ohio accumulating 200 to 300% of normal snowfall to date.

U.S. Drought Monitor North Central States

January 7, 2025
(Released Thursday, Jan. 9, 2025)
Valid 7 a.m. EST



U.S. Drought Monitor Class Change - North Central States 8 Week

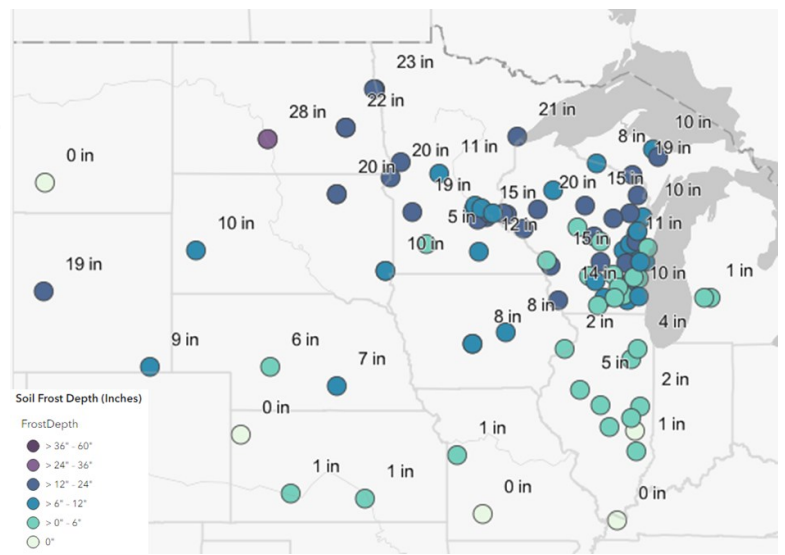


Maps generated by the [National Drought Mitigation Center](https://www.nationaldroughtmitigationcenter.org/).

Crops and Livestock

The lack of snowfall and shallow snow depths across the Corn Belt increases the vulnerability of fall planted crops to cold damage. Recent observations of frost depths indicate over 12 inches in North Dakota, Minnesota, and northwestern Wisconsin. For the rest of Wisconsin across into central Iowa and Nebraska, observations are around 6 inches in depth. The lack of snow limits the insulation of the soil from the cold. Drier soils will also freeze more quickly than wetter soils, allowing quicker frost depth penetration. For southern states in the region, frost depth is minimal and soils may still be unfrozen in some areas.

The large storm in early January with snow and wind likely impacted livestock in the southern part of the region, especially in the Plains.



Frost depths across the North Central US. Map generated on 01/10/2025 from [the National Weather Service website](https://www.weather.gov).

Fire

The National Interagency Fire Center has categorized the fire potential for the Midwest region as normal for January and is expected to continue normal conditions through March. Still, the lack of snow cover could bring some additional fire activity.

Outlook

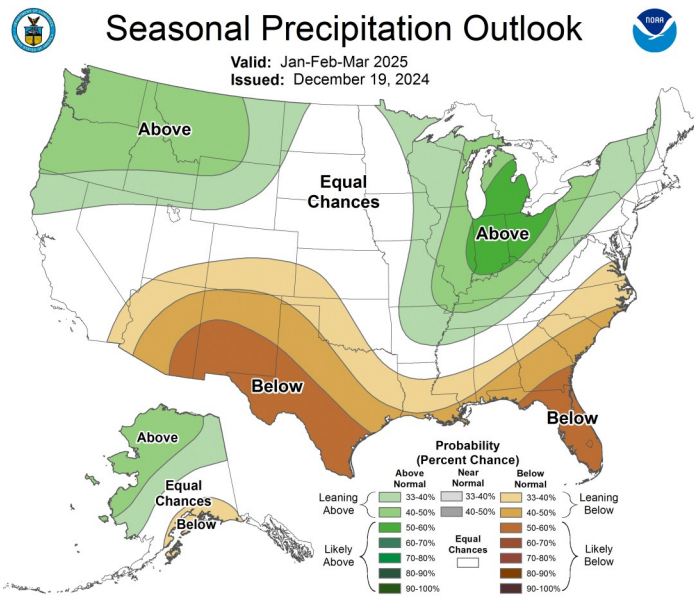
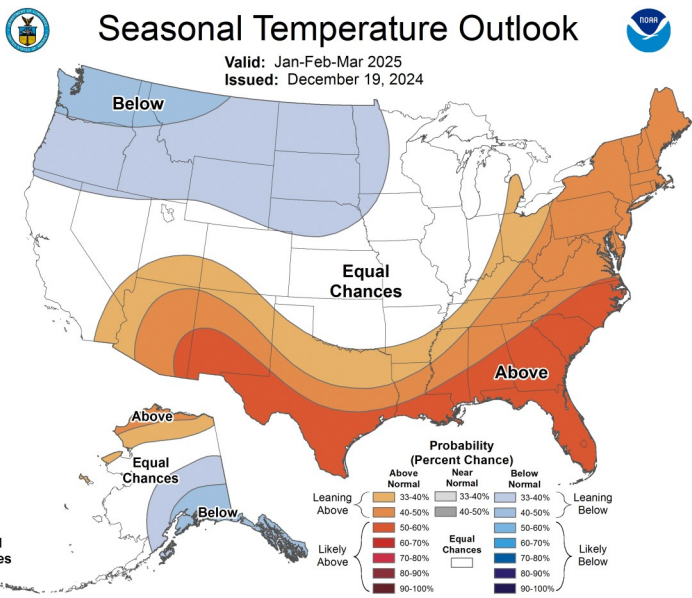
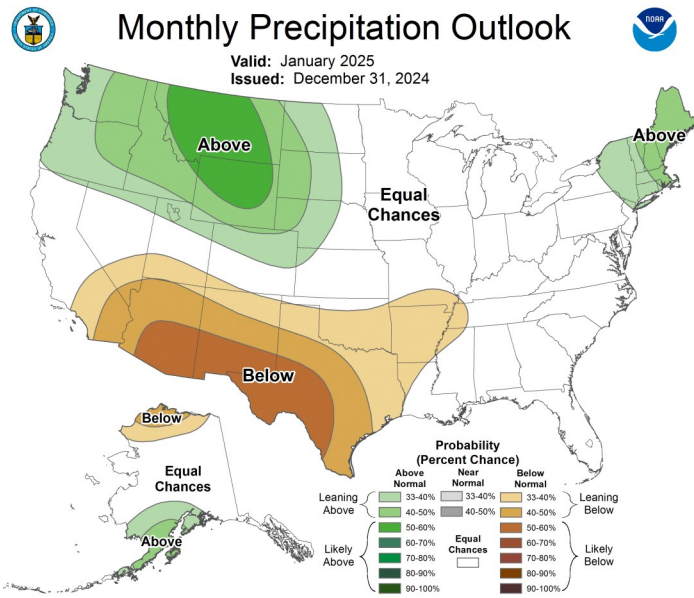
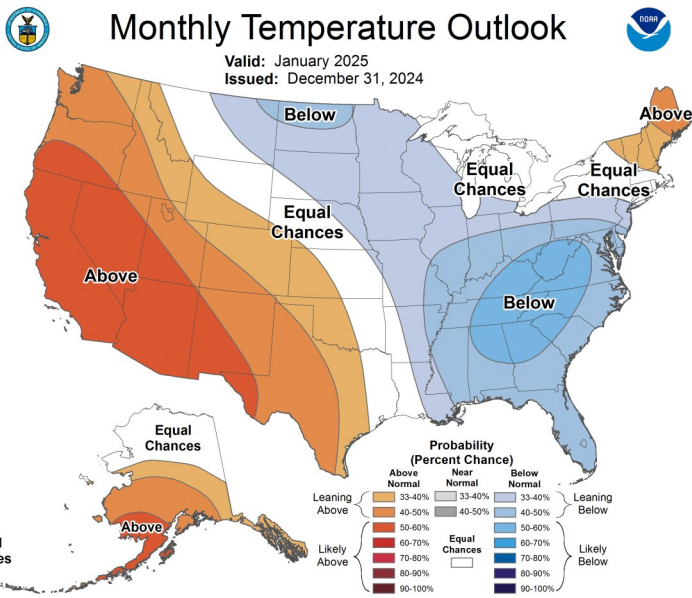
Looking through January, much of the Midwest region may need to bundle up as temperatures are leaning toward cooler-than-normal.

On the other hand, precipitation trends this month are a bit of a toss-up, and there's a near-equal chance of below or above-normal precipitation across much of the region. However, those in southern Missouri may experience below-normal precipitation, while communities in the Plains are more likely to receive above-normal precipitation in January.

Looking further out, seasonal temperature trends across the region show near-equal chances of above- or below-normal temperatures for most of the Midwest. Portions of the Plains and western Minnesota are leaning cooler-than-average through March.

In terms of seasonal precipitation, much of the eastern portion of the region is leaning toward above normal precipitation. The greatest likelihood of wetter-than-normal conditions are projected for Indiana, Michigan, and portions of Ohio, with less certainty in precipitation trends for the Plains and swaths of Iowa and Minnesota.

With La Niña still pending, the outlooks lean wetter to the east, producing a better chance for drought alleviation. In the Plains, there is generally less winter precipitation projected, limiting drought improvement, but the latter part of this three-month period is usually higher in snowfall.



Outlooks provided by the [Climate Prediction Center](https://www.cpc.ncep.noaa.gov/).

Partners and Contributors

- [United States Department of Agriculture \(USDA\)](https://www.usda.gov/)
- [National Oceanic and Atmospheric Administration \(NOAA\)](https://www.noaa.gov/)
- [Climate Prediction Center \(CPC\)](https://www.cpc.ncep.noaa.gov/)
- [National Weather Service \(NWS\)](https://www.weather.gov/)
- [National Center for Environmental Information \(NCEI\)](https://www.ncei.noaa.gov/)
- [National Drought Mitigation Center \(NDMC\)](https://www.ndmc.gov/)
- [National Integrated Drought Information System \(NIDIS\)](https://www.nidis.gov/)
- [Midwestern Regional Climate Center \(MRCC\)](https://www.mrcc.org/)
- [Midwest State Climatologists](https://www.midwestclimate.org/)
- [High Plains Regional Climate Center \(HPRCC\)](https://www.hprcc.org/)

For More Information

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