



✓ Important Messages:

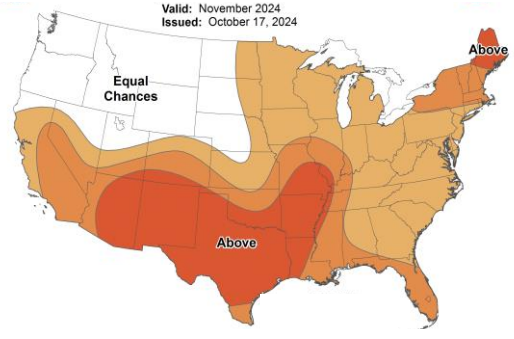
High Variability Winter Possible

- ✓ Given model trends toward a fairly weak and short-lived La Niña to possibly even ENSO Neutral conditions, forecasters are anticipating the potential of a high variability winter.
- ✓ This means much of the winter patterns, while seeing some influence from the weak La Niña, will likely be dominated by more short term trends and patterns.
- ✓ In particular, influences from the MJO and stratospheric vortex will be important to monitor in addition to contributions from other teleconnections (i.e. NAO/AO).

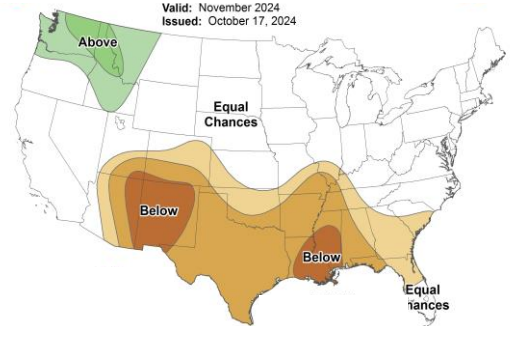
November 2024 Temperature & Precipitation Outlooks

- Effects from the MJO played a part in driving some of the uncertainties (EC) for the western parts of CR as an increasingly cool signal is possible later in the month. In general both the numerical and dynamical models push a warm signal across much of CR with a stronger signal as you move south. The Great Lakes Region shows a milder warm signal with far more uncertainty amongst guidance.
- Very mixed precip signals in guidance for most of CR with a pronounced dry signal across the south. Some models show pockets of higher precip potential for Kansas, which is the reason for the inclusion of EC chances there.

One Month Temperature Outlook

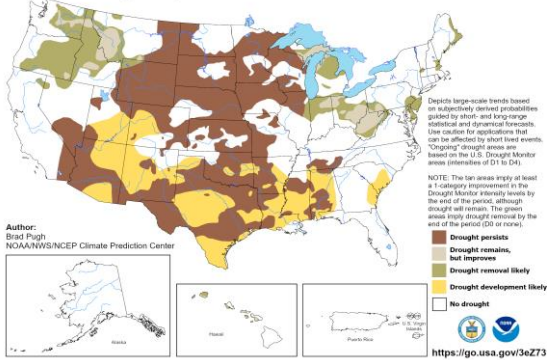


One Month Precipitation Outlook



Seasonal Drought Outlook

U.S. Seasonal Drought Outlook Valid for October 17, 2024 - January 31, 2025
Drought Tendency During the Valid Period Released October 17, 2024

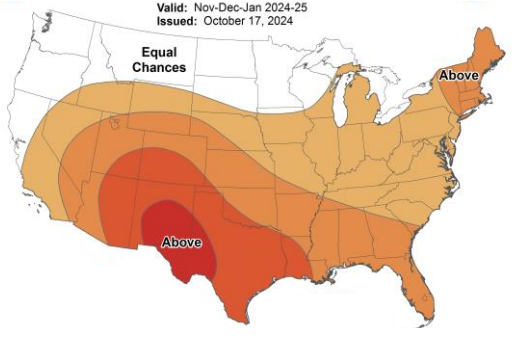


- Much of CR, particularly across the northern/central Plains, do not tend to see much improvement in drought conditions during the winter months.
- In the Great Lakes region and Upper Ohio Valley, some improvement in drought is expected between a higher likelihood of shorter term patterns favorable for precip in addition to the effects from a weak La Niña bringing a higher likelihood for precip there.

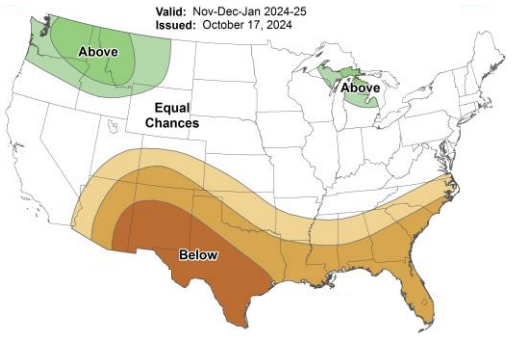
Nov-Dec-Jan 2024/2025 Temperature & Precipitation Outlooks

- Forecasters reduced temperature impacts from a weak La Niña for NDJ, with expanded coverage of above normal temperatures to the north, especially into the Great Lakes region. Generally, there is a warm signal across the US with just a bit more uncertainty further north where impacts from a weak La Niña may play a role.
- A very mixed precip signal across much of CR is noted with most of the greatest impacts on the fringes of the region. Great Lakes above average precipitation was dialed back due to the likelihood of a weaker La Niña.

Three Month Temperature Outlook



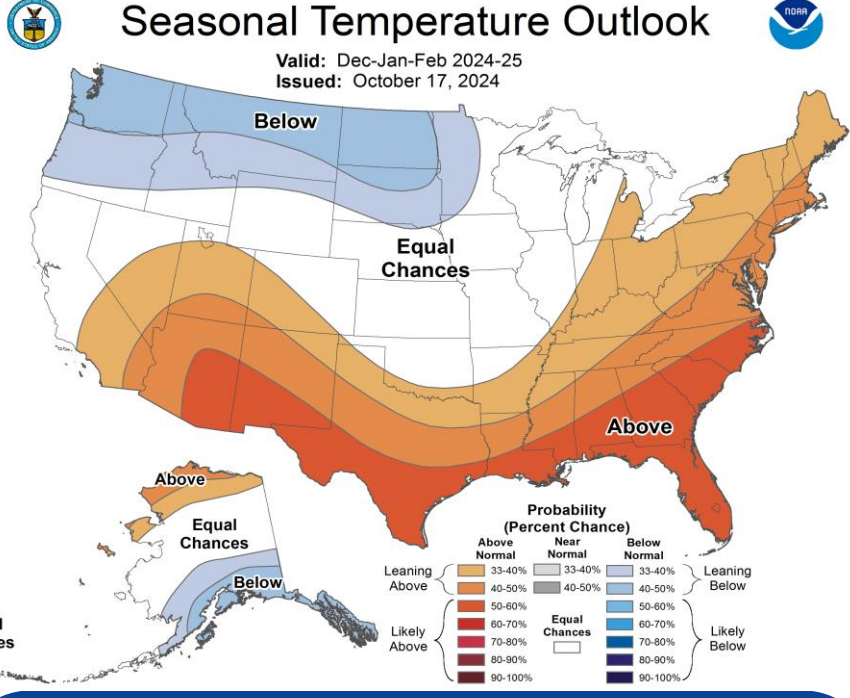
Three Month Precipitation Outlook



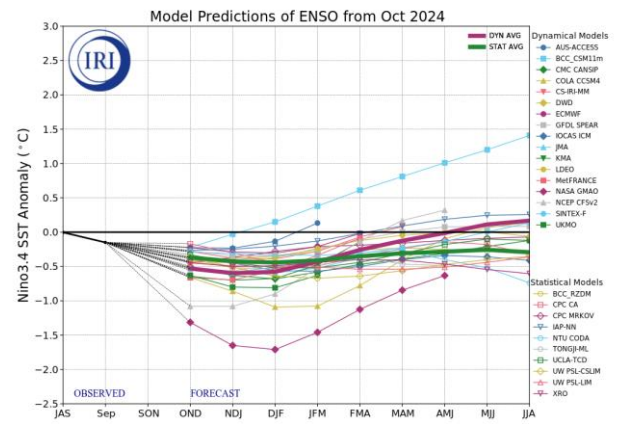
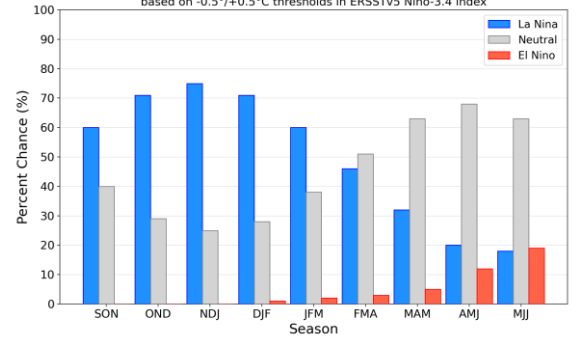


The Winter Outlook brings effects from La Niña but impacts are likely to be “dialed back” in extent

IRI/CPC Probabilistic ENSO Forecast/Plumes



Official NOAA CPC ENSO Probabilities (issued October 2024)
based on $-0.5^{\circ}/+0.5^{\circ}\text{C}$ thresholds in ERSSTv5 Niño-3.4 index



- Consolidated statistical models actually suggest ENSO Neutral conditions through the winter with the dynamical models showing a better La Niña signal (CFSv2 being an outlier). NMME shows a slightly stronger La Niña signal.
- Forecast probabilities remain around 70% for the development of La Niña conditions.

The Winter Outlook suggests a general trend toward La Niña conditions, though the weak nature has led to a “dialed back” La Niña forecast. This is especially true with temperatures as much of the forecast guidance really trends warmer, particularly early in the winter period. February somewhat acts on its own with much more guidance suggestive of cooler temperatures in the north central US. With precipitation we see a much more typical La Niña pattern with wetter conditions expected in the Great Lakes region, with impacts increasing by JFM.

Useful Links/Info:

- News from [Climate.gov](https://www.climate.gov)
- [Latest ENSO Blog](#) from Climate.gov
- [Sea Surface Temperatures](#) from the Climate Prediction Center
- [Latest ENSO Discussion](#) from the Climate Prediction Center
- [Drought Information](#) from the US Drought Monitor
- [Interactive GIS Mapping](#) from NCEI (Anomalies/Rankings)
- [Local Climate Analysis Tool \(LCAT\)](#) – Account registration required

Other Teleconnection Info

- Over the next month the MJO is expected to side to the Western Pacific with phase 5 and 6 likely playing a strong role in November.
- Given the a weak La Niña signal, the impact of other teleconnections will likely contribute to a highly variable weather pattern. As a result, both the MJO as well as the NAO/AO should play major roles in the week to week patterns.
- This variability will likely lead to higher uncertainty and greater swings this winter.

