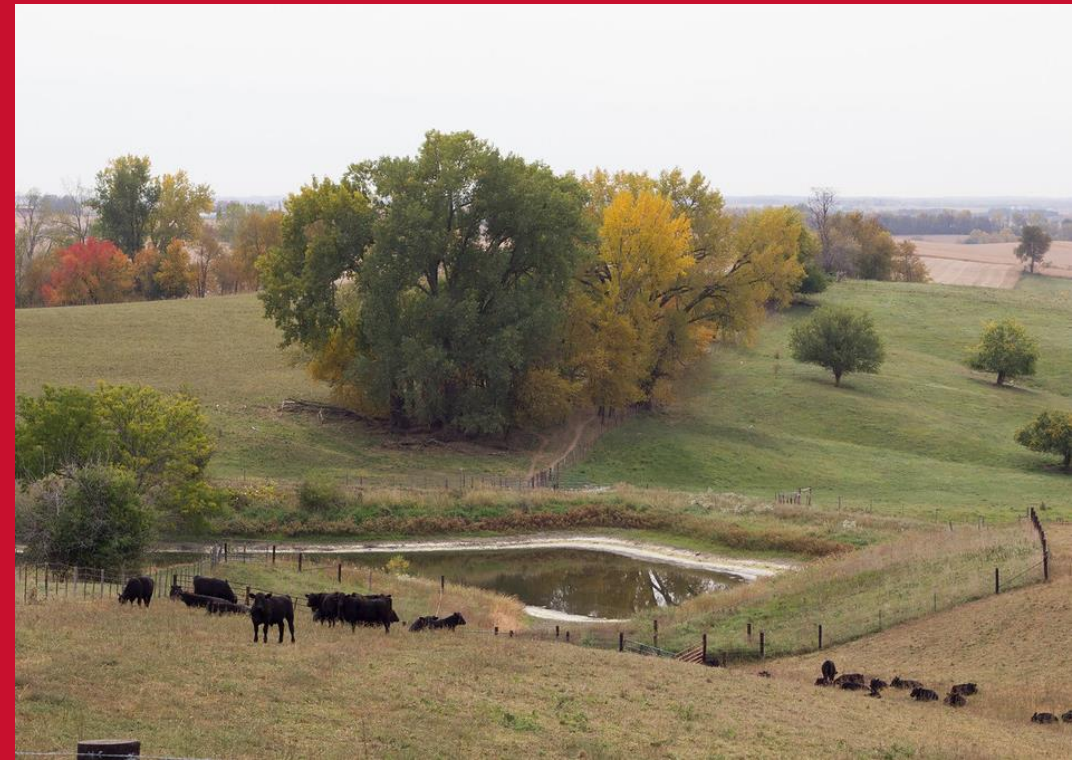


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# Winter Weather Outlook

**Madelynn Wuestenberg**

December 10, 2024



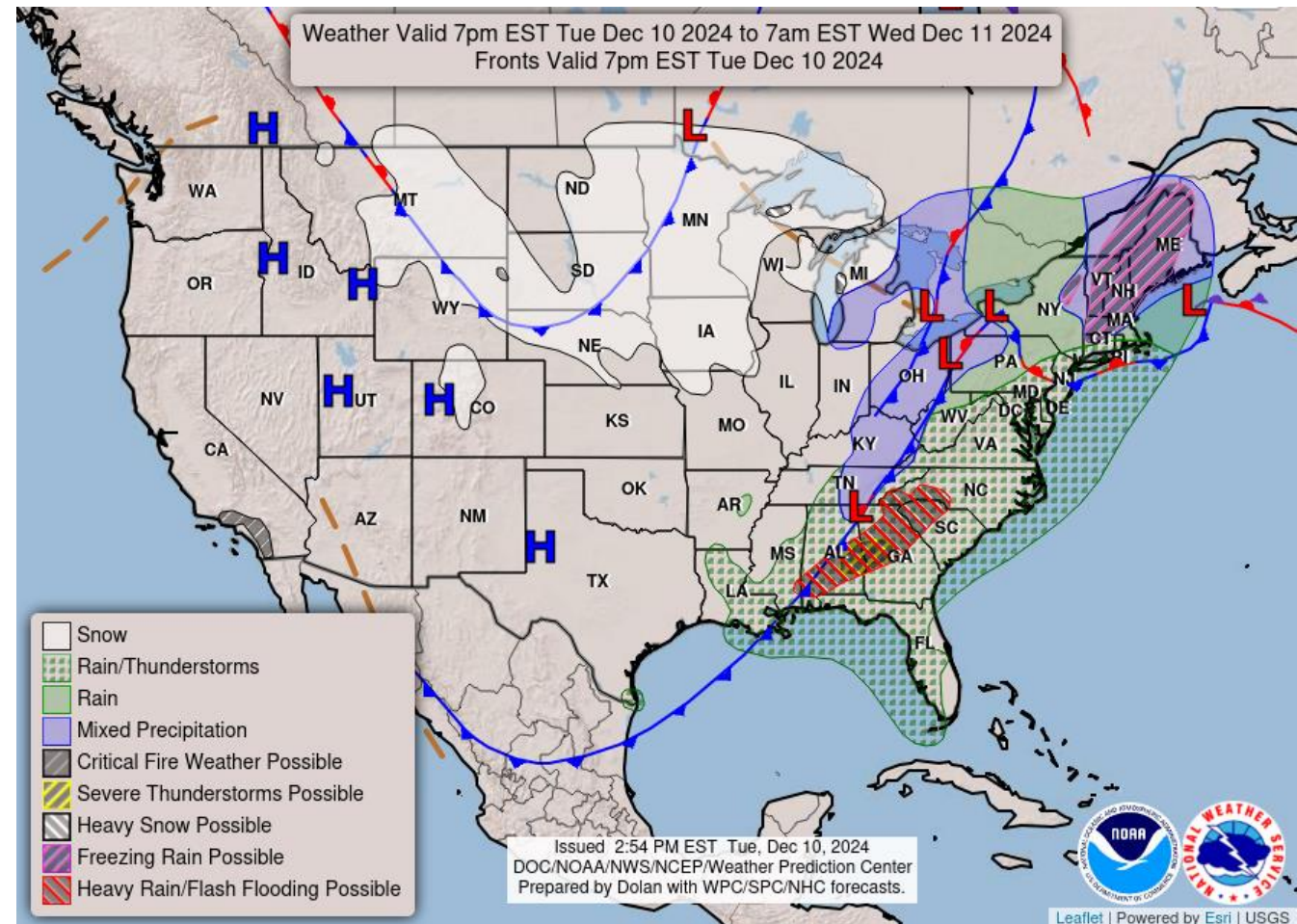
# Introduction

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- Week-out weather report
- El Nino Southern Oscillation
- Current ENSO outlook
- CPC winter outlooks

# Short-term weather

- Cold front moves in tonight
- Cold cold cold temperatures Wednesday and Thursday
- Scattered snow chances across the state

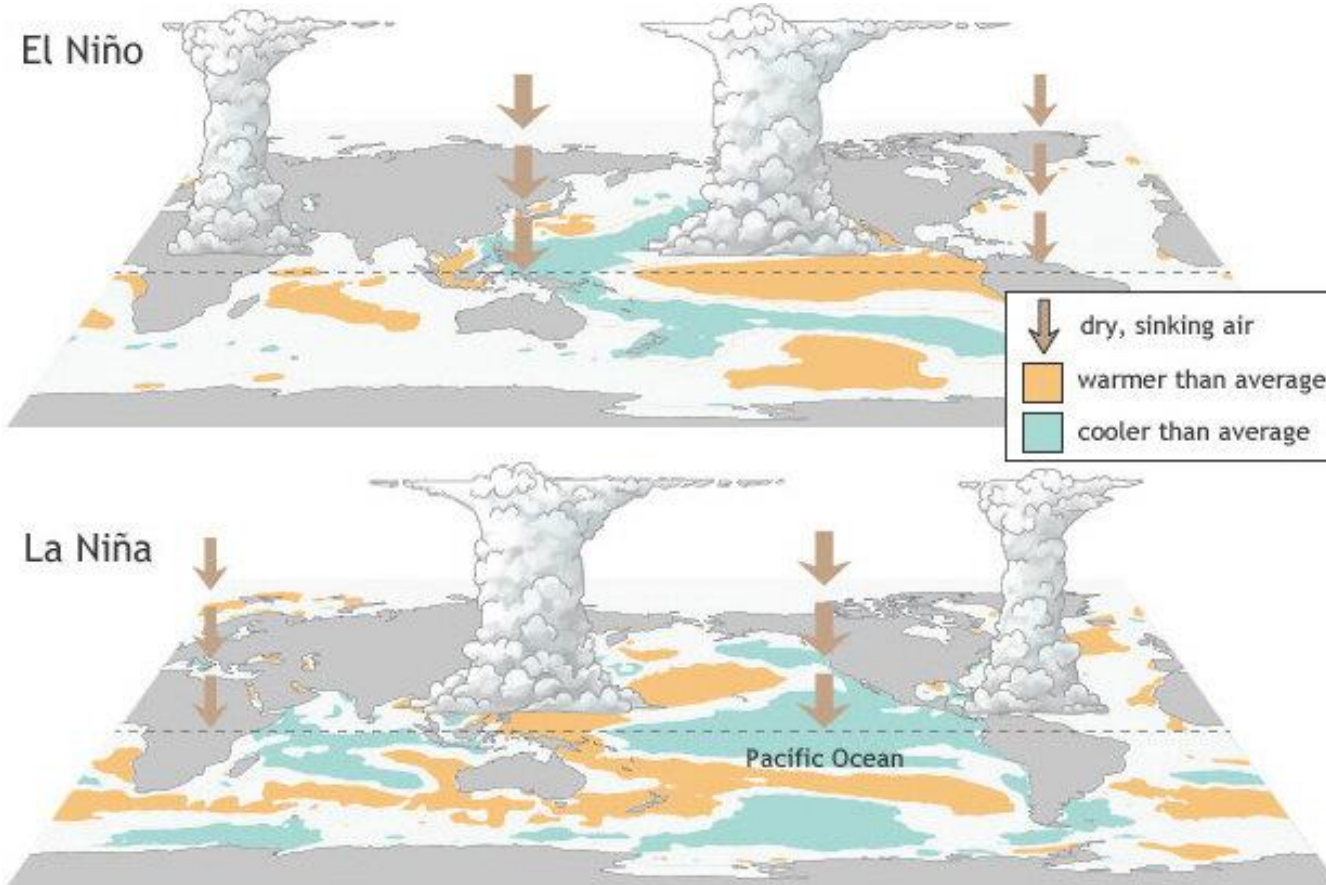


# ENSO

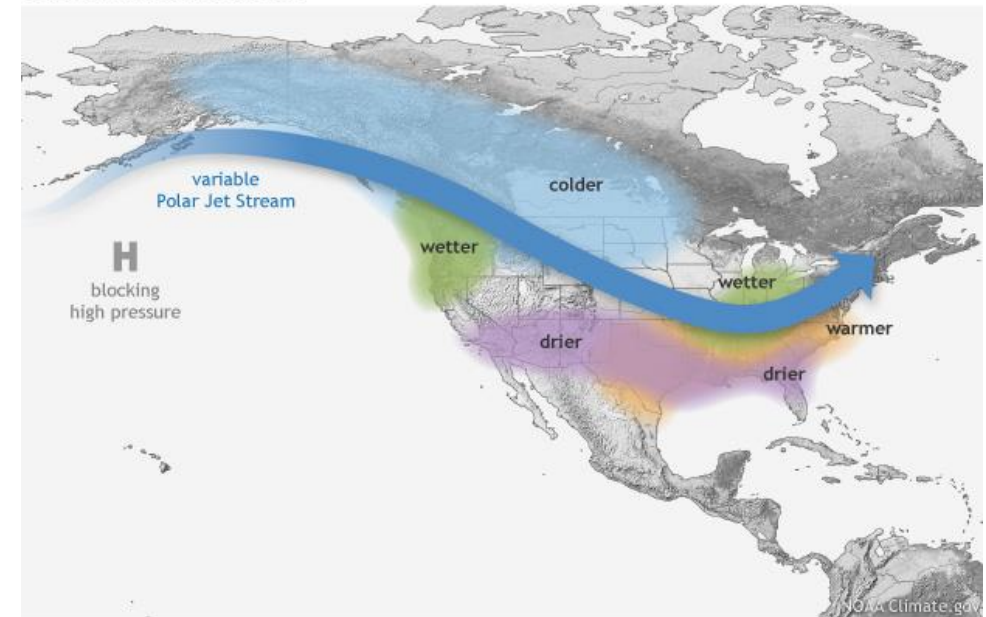
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- During the 1960s, scientists connected the links between patterns in changing SSTs and atmospheric pressure
- Naturally occurring phenomenon
- El Niño = warm phase (weak trade winds)
- La Niña = cool phase (strong trade winds)
- Changes in SSTs affect the distribution of atmospheric circulation features
- Causes changes in intensity/position of jet streams, leading to storm activity occurring at higher latitudes

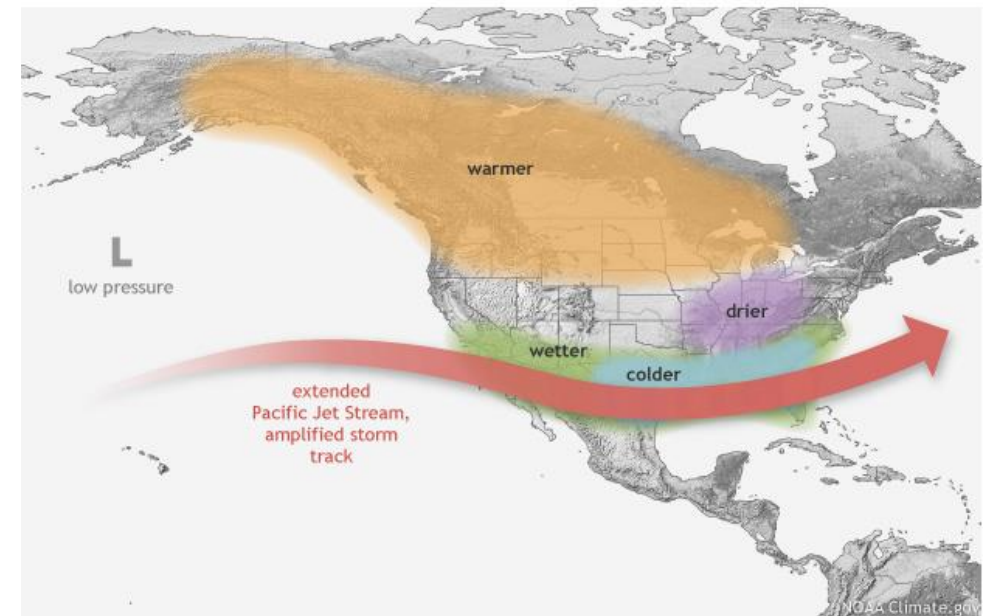
# ENSO coupling



WINTER LA NIÑA PATTERN



WINTER EL NIÑO PATTERN



# ENSO outlook

- ENSO Alert System  
Status: **La Niña Watch**
- ENSO-neutral conditions persisting with near average SSTs
- There is a 71% chance of La Nina emerging in December-February

Official NOAA CPC ENSO Probabilities (issued November 2024)

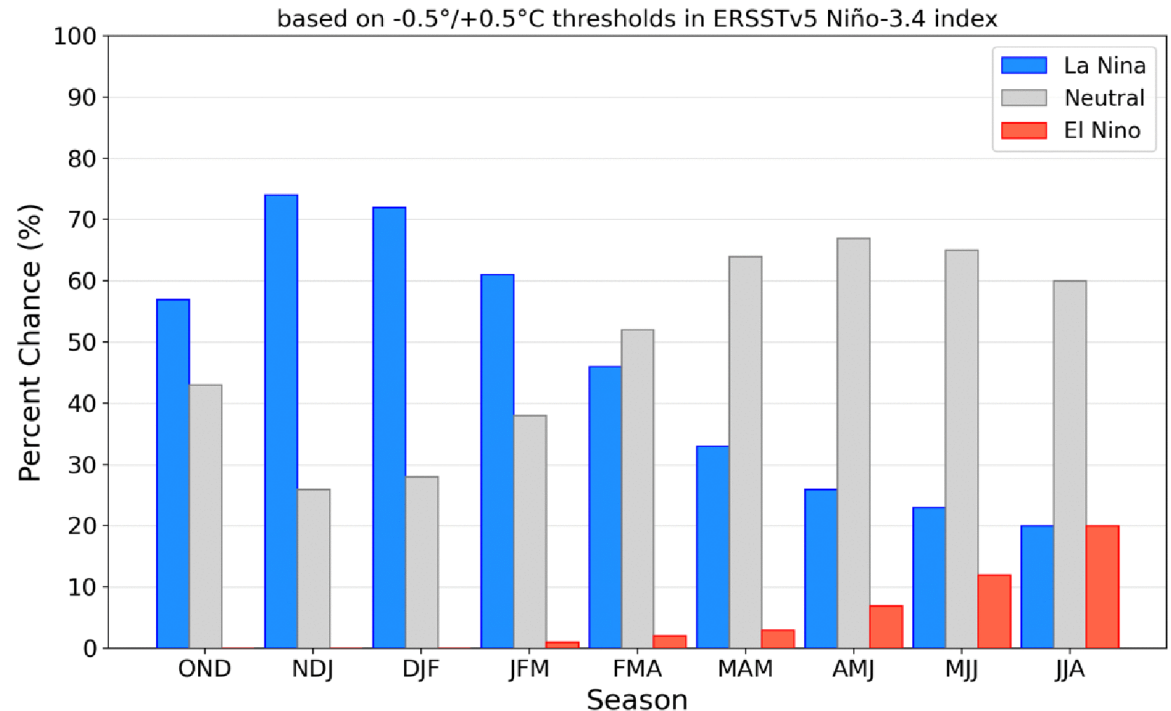
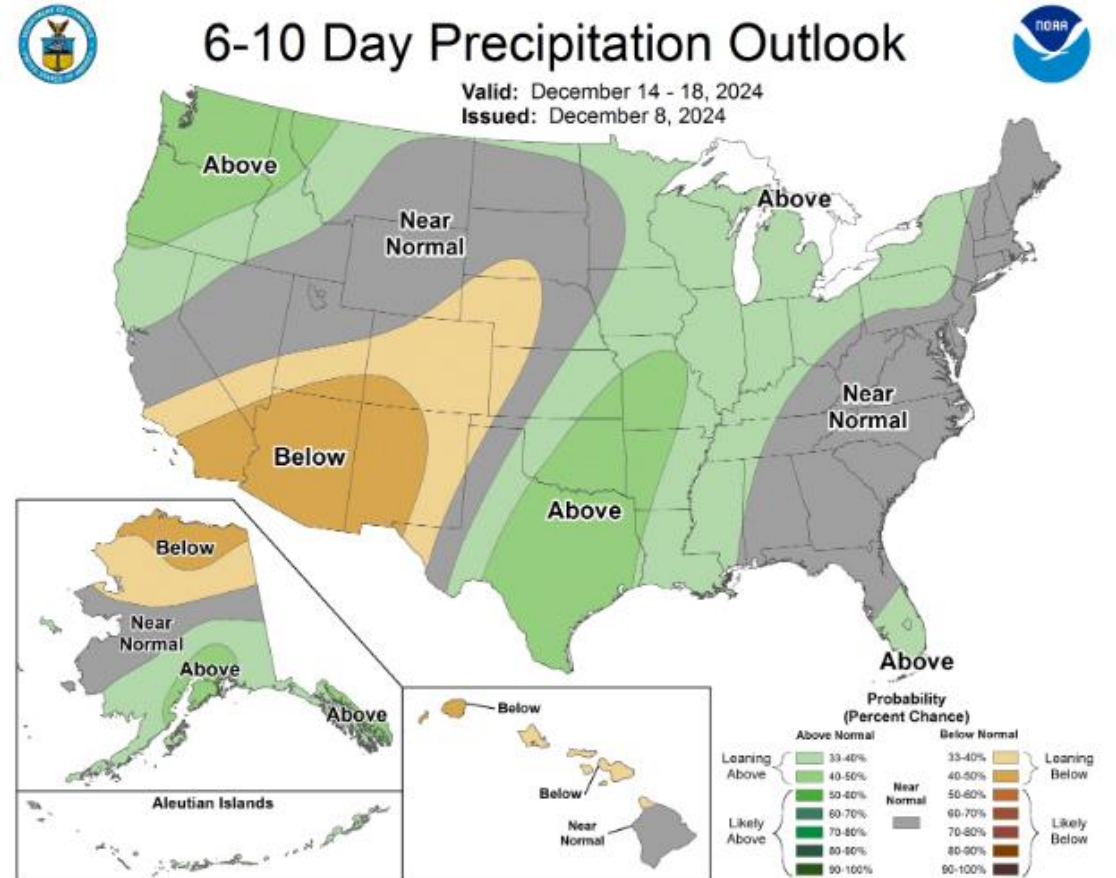
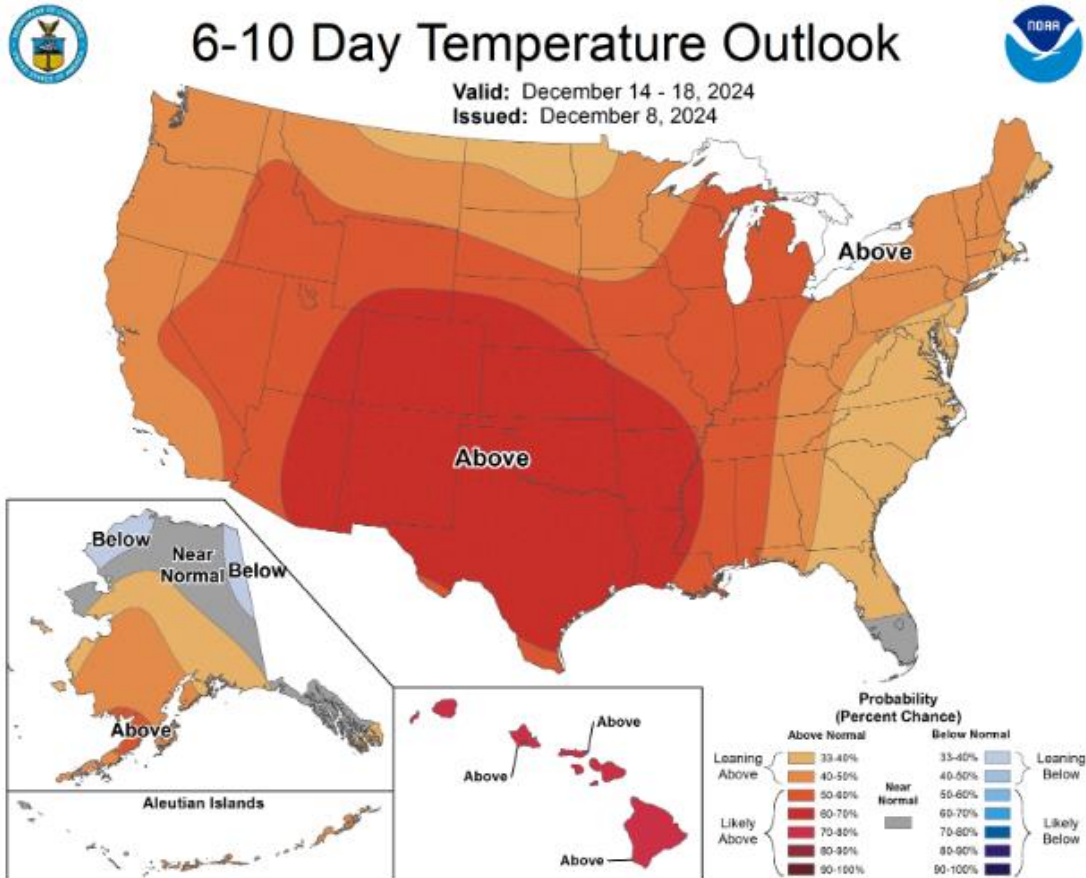


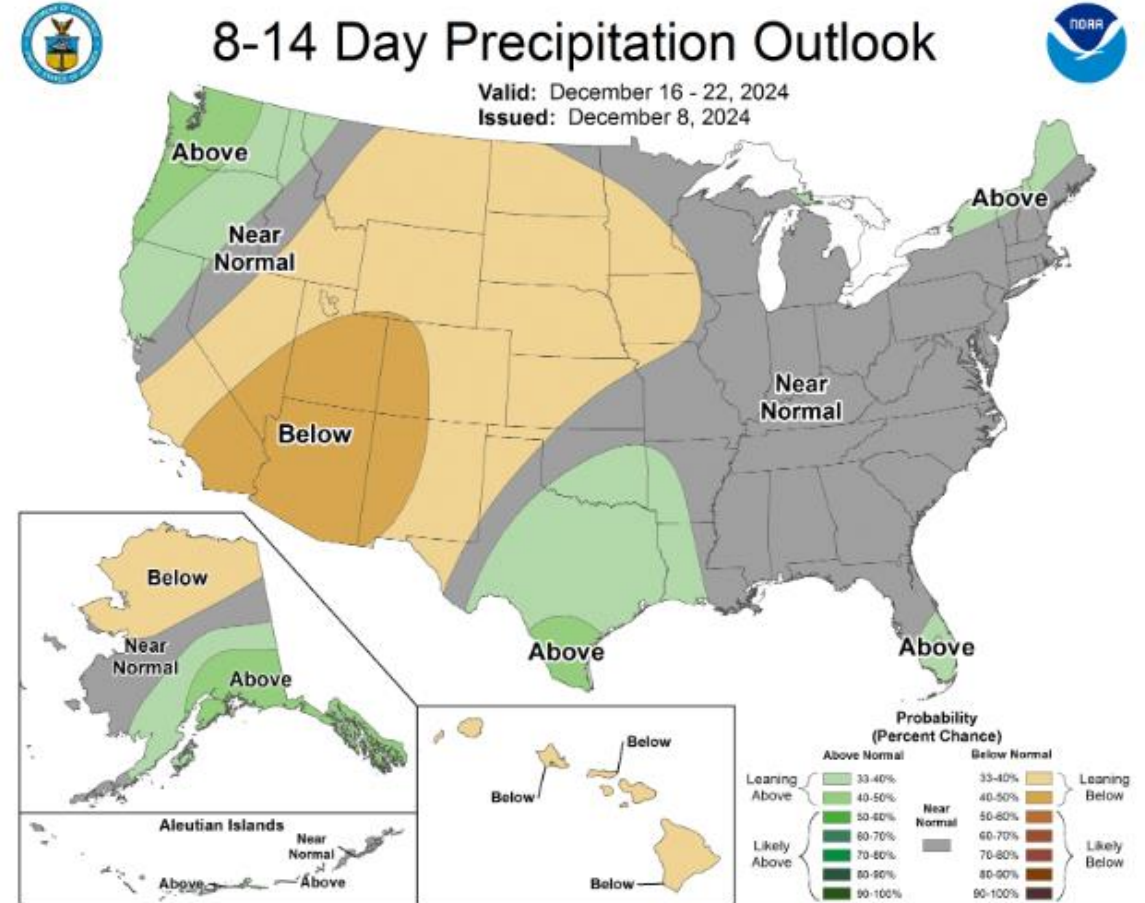
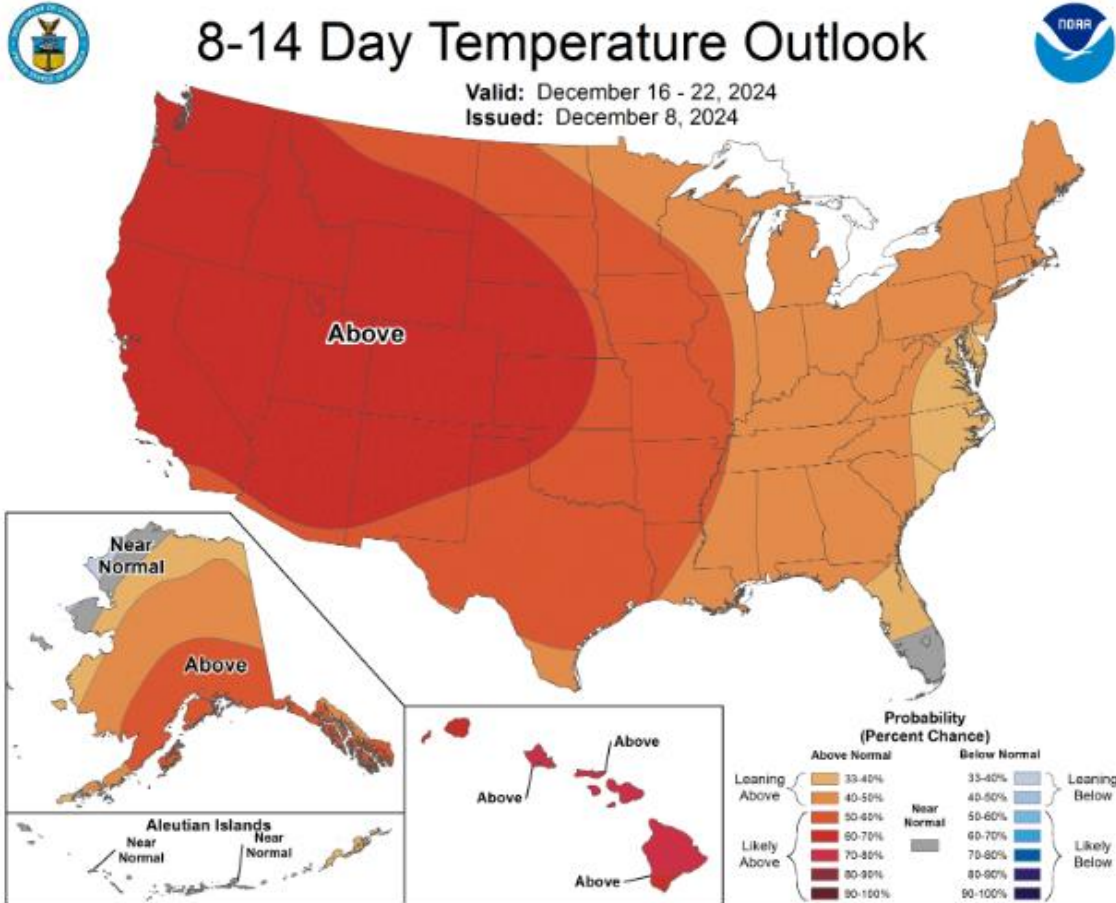
Figure 7. Official ENSO probabilities for the Niño 3.4 sea surface temperature index ( $5^{\circ}\text{N}$ - $5^{\circ}\text{S}$ ,  $120^{\circ}\text{W}$ - $170^{\circ}\text{W}$ ). Figure updated 14 November 2024.

[https://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/ensodisc.shtml](https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensodisc.shtml)

# December 14-18



# December 16-22

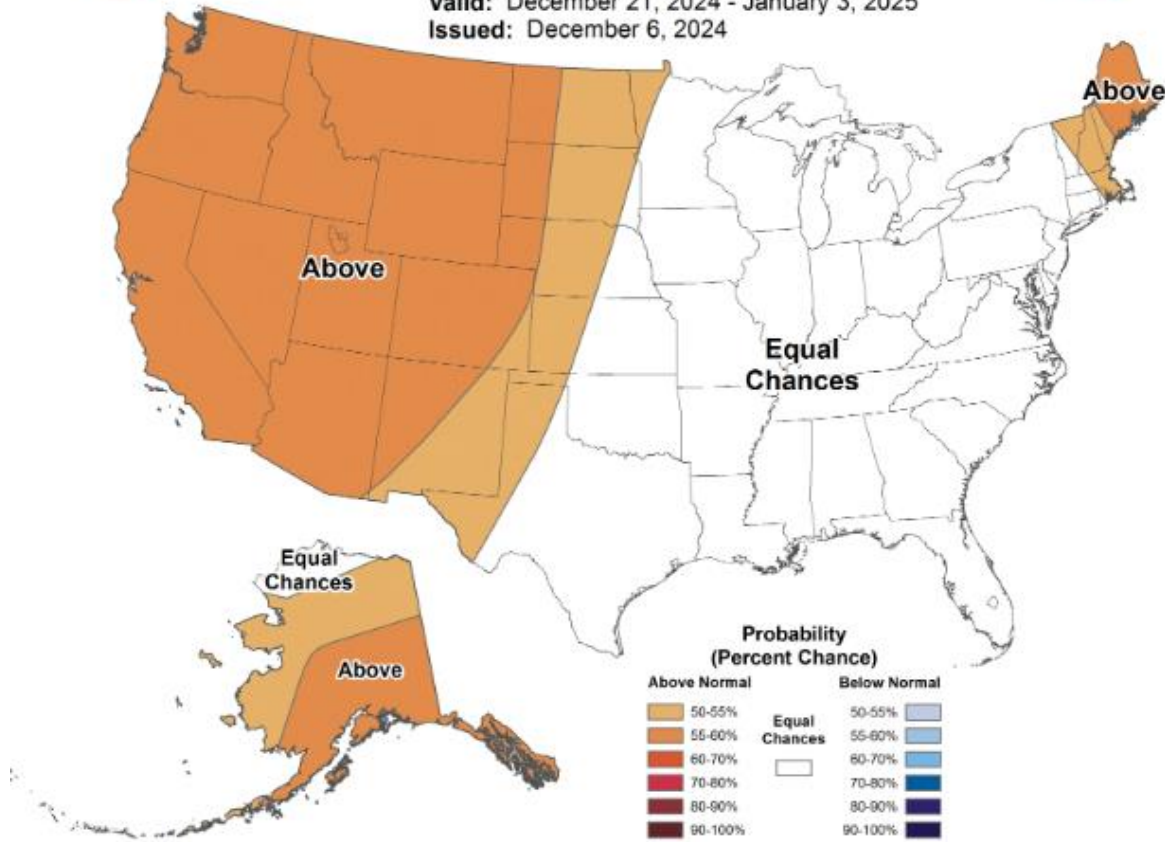


# December 21-January 3



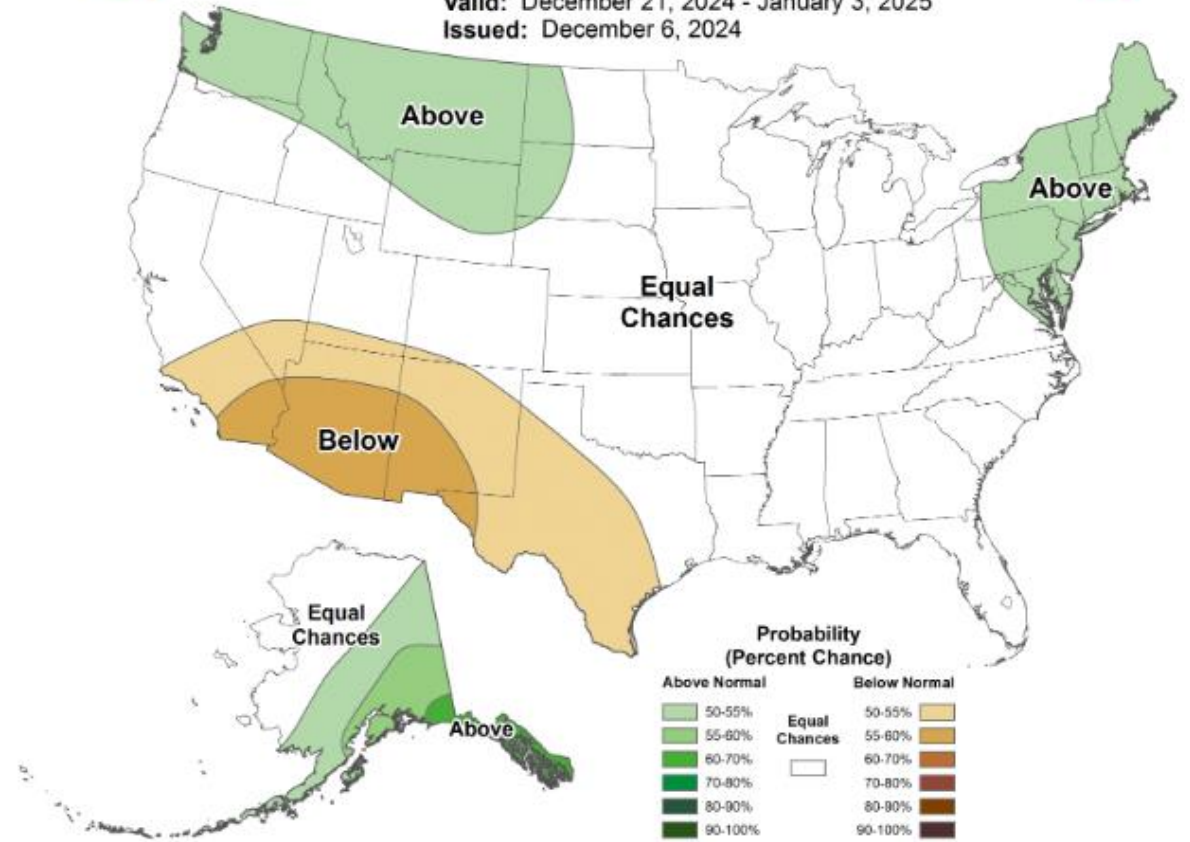
## Weeks 3-4 Temperature Outlook

Valid: December 21, 2024 - January 3, 2025  
Issued: December 6, 2024



## Weeks 3-4 Precipitation Outlook

Valid: December 21, 2024 - January 3, 2025  
Issued: December 6, 2024



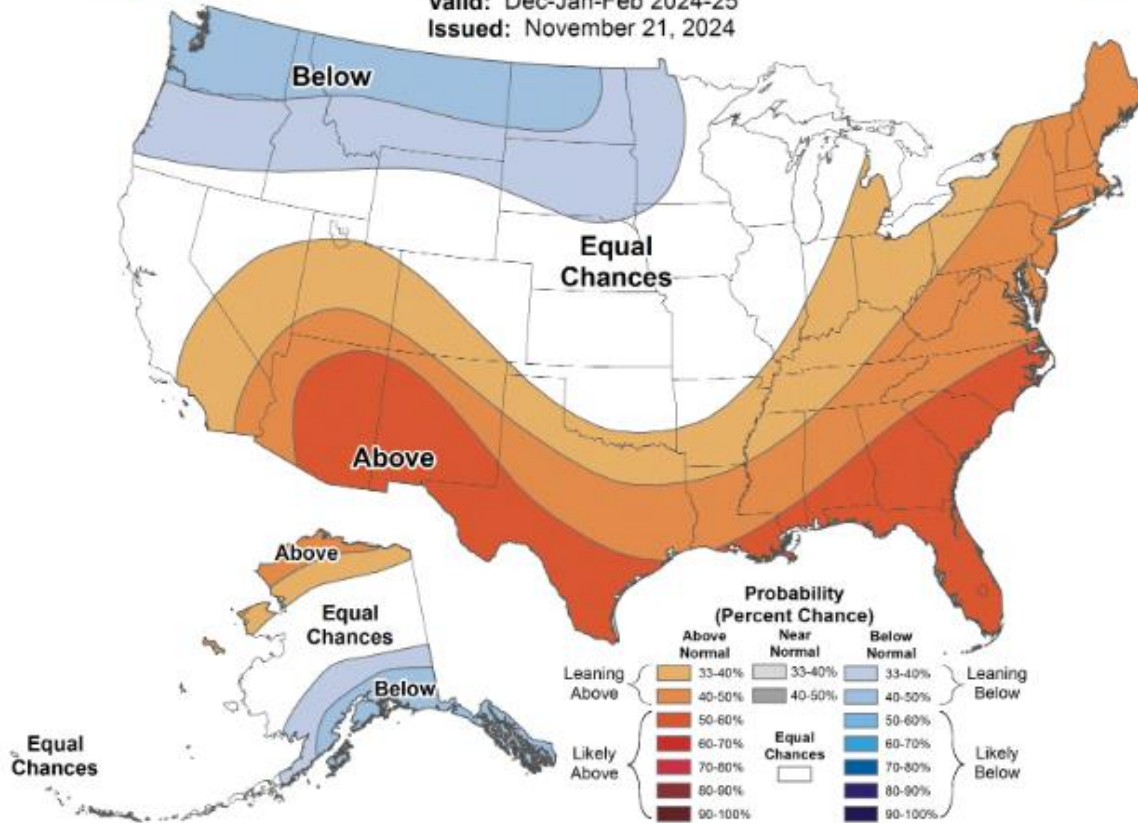
# December-February



## Seasonal Temperature Outlook



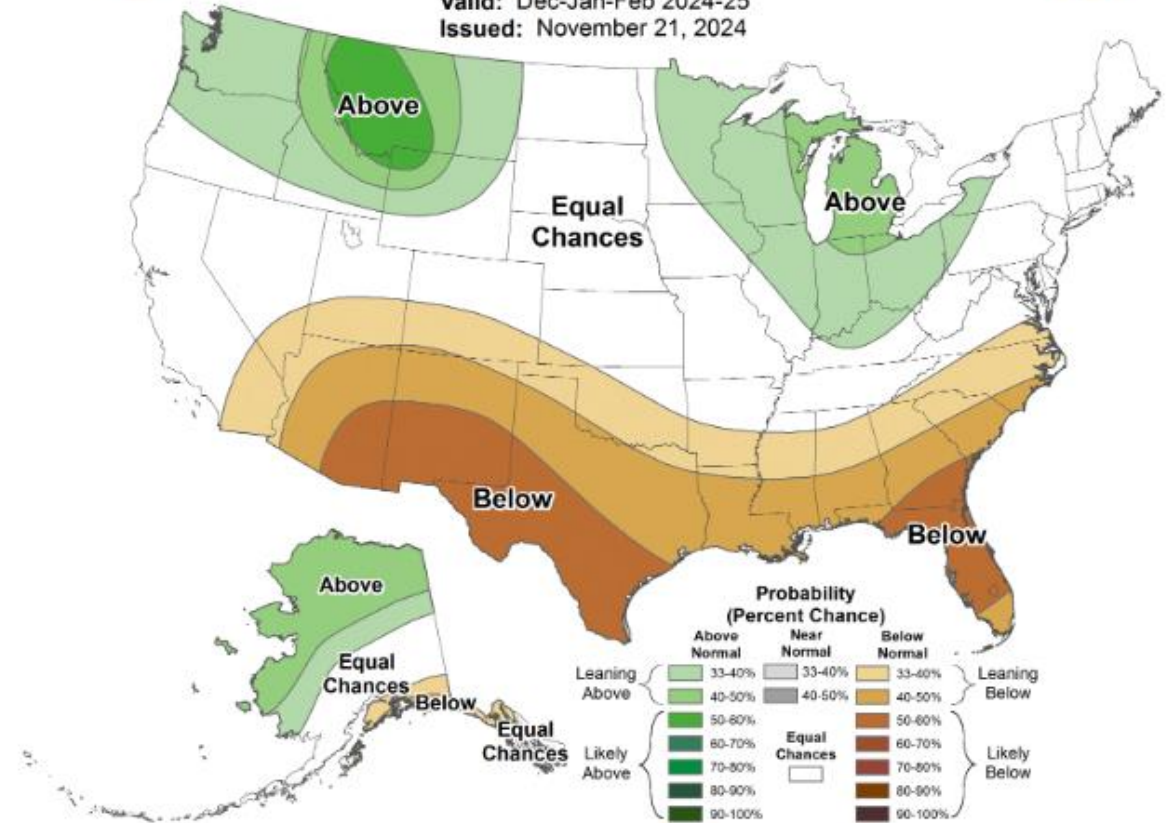
Valid: Dec-Jan-Feb 2024-25  
Issued: November 21, 2024



## Seasonal Precipitation Outlook



Valid: Dec-Jan-Feb 2024-25  
Issued: November 21, 2024



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# Thank you

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