

El Nino & California Forecast

Winter/Spring 2023-2024

Regional Operations Center

Western Region

Wednesday, December 20

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NWS Liaison WFTIIC

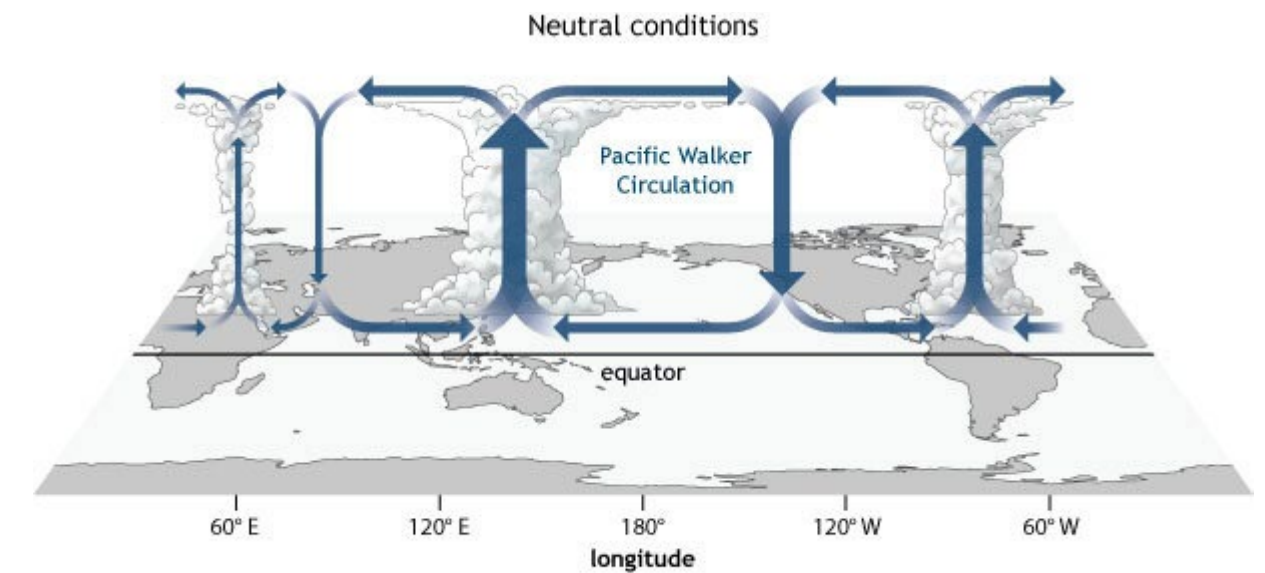
**National Weather Service
Western Region Headquarters**

El Niño and La Niña are climate patterns in the Pacific Ocean that influence global weather patterns

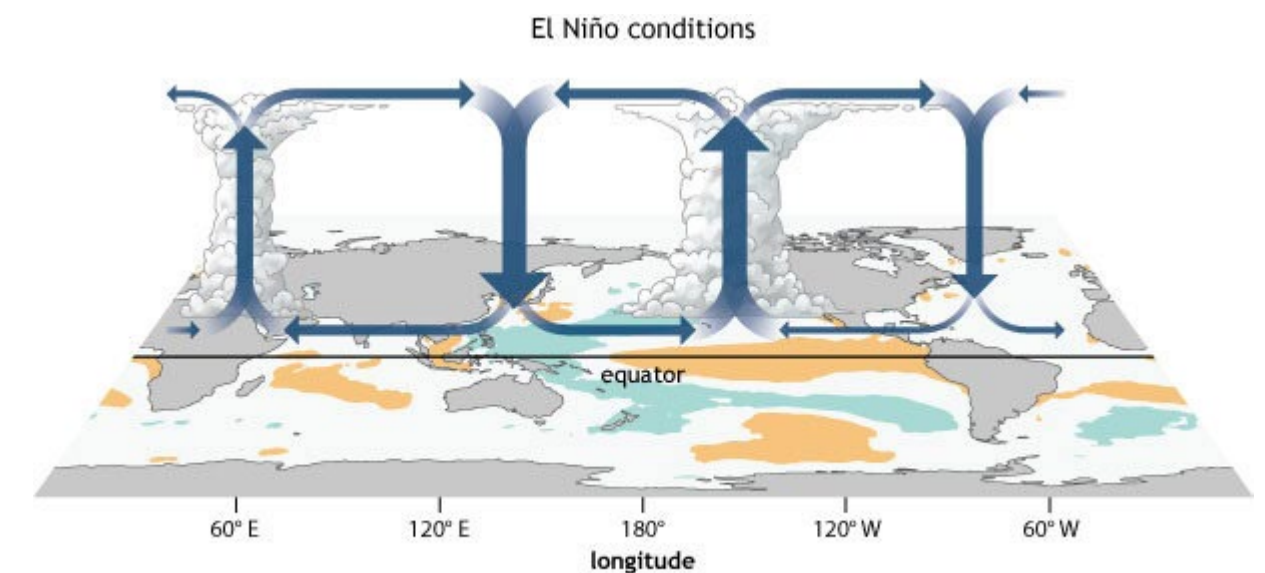
During normal conditions in the equatorial Pacific, trade winds blow west along the equator, taking warm water from South America towards Asia

When trade winds weaken, warm surface water moves eastward and reduces the upwelling of cold water off the coast of South America. This is what climatologists call El Niño.

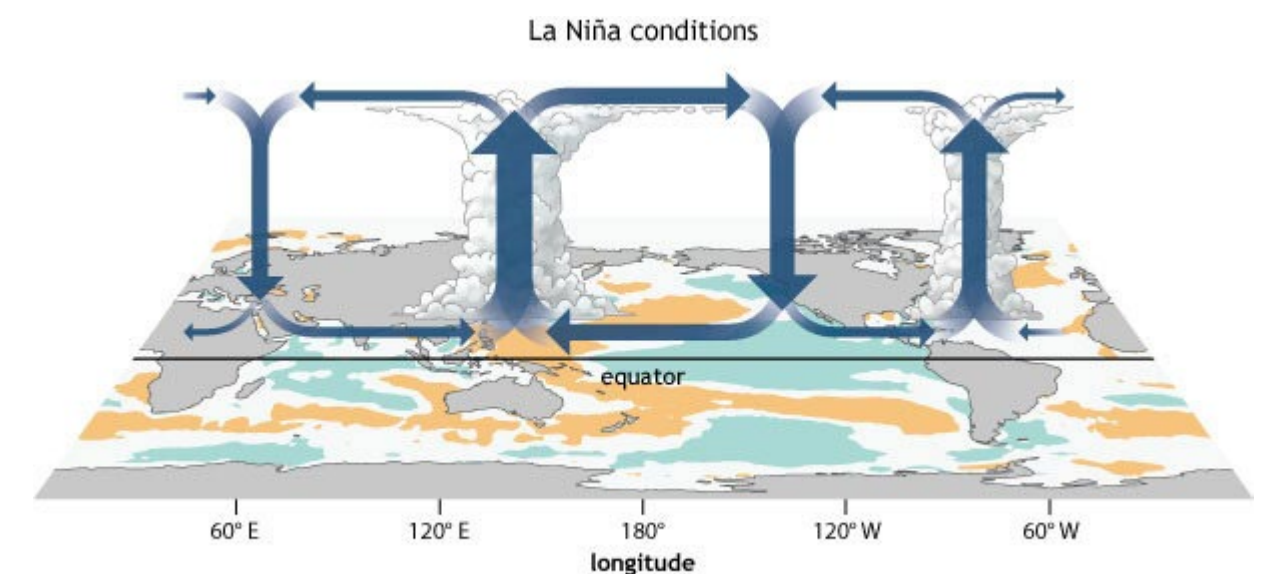
When trade winds strengthen and become stronger than normal, they blow the warm water back into the western Pacific and restart the upwelling of cool water towards the surface in the eastern Pacific. This is what climatologists call La Niña.



NOAA Climate.gov



NOAA Climate.gov



NOAA Climate.gov

**In the 19th Century,
Peruvian fisherman
noticed the phenomenon
affecting their fisheries.
Since El Niño typically
peaks around Christmas
time, the fisherman gave it
the name El Niño, which
means the boy (in
reference to Christmas and
baby Jesus)**





The warmer ocean fuels an intensification and southern shift of the Jet Stream

Climate impacts show up mostly in the Winter in North America

El Niño can be predicted a year or more in advance

- **Predicted with high confidence 6 months in advance**

Recurrs on a 2-7 year period, but pattern not very reliable

- **Usually get alternating El Nino & La Nina with neutral in between**
- **Sometimes multiple years of either in a row**



El Niño Update - *Updated 14 December 2023*

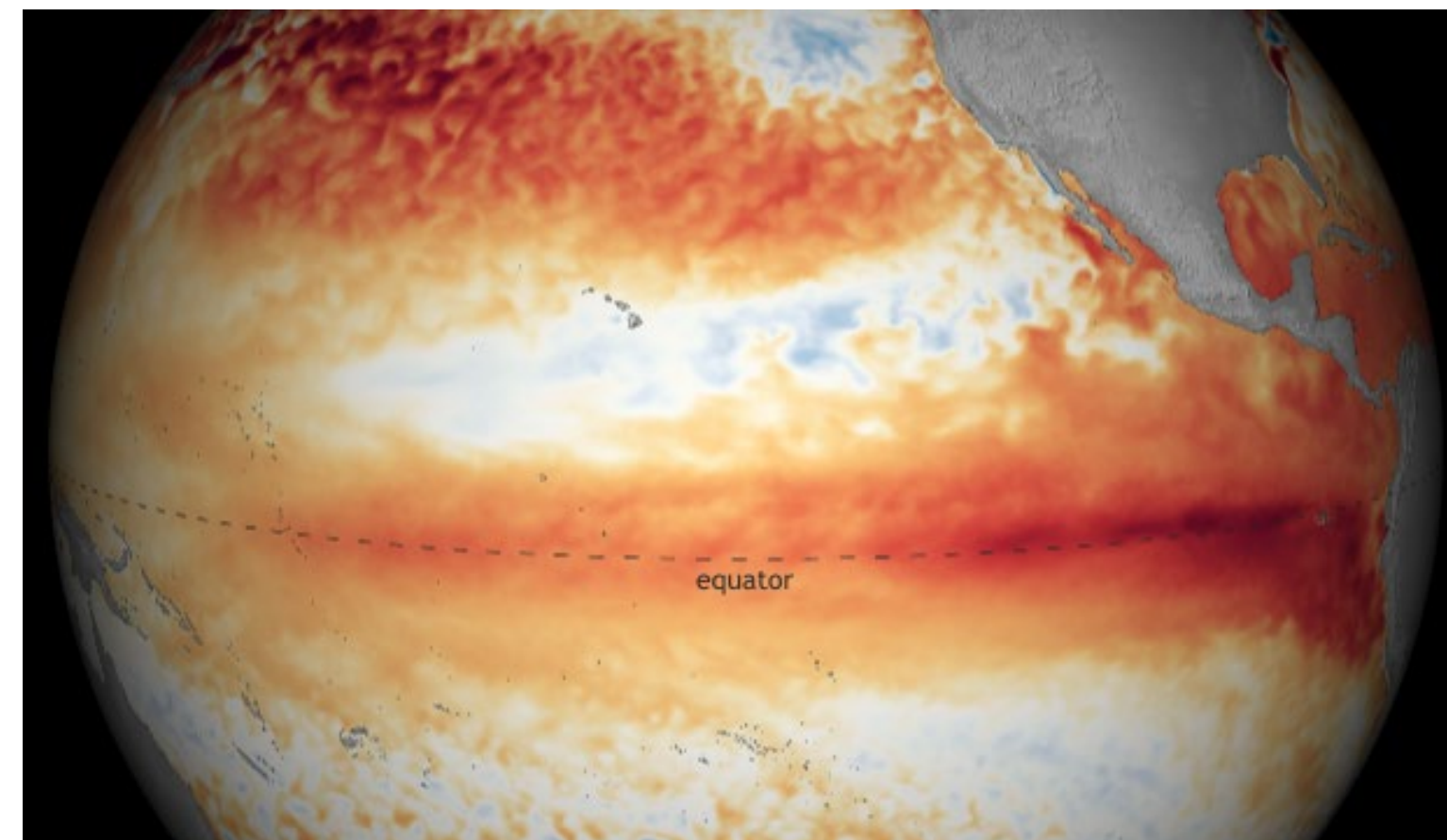
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An **El Niño Advisory** is in effect

El Niño is anticipated to continue through the Northern Hemisphere Winter with a transition to ENSO-neutral favored during Spring 2024 (60% chance)

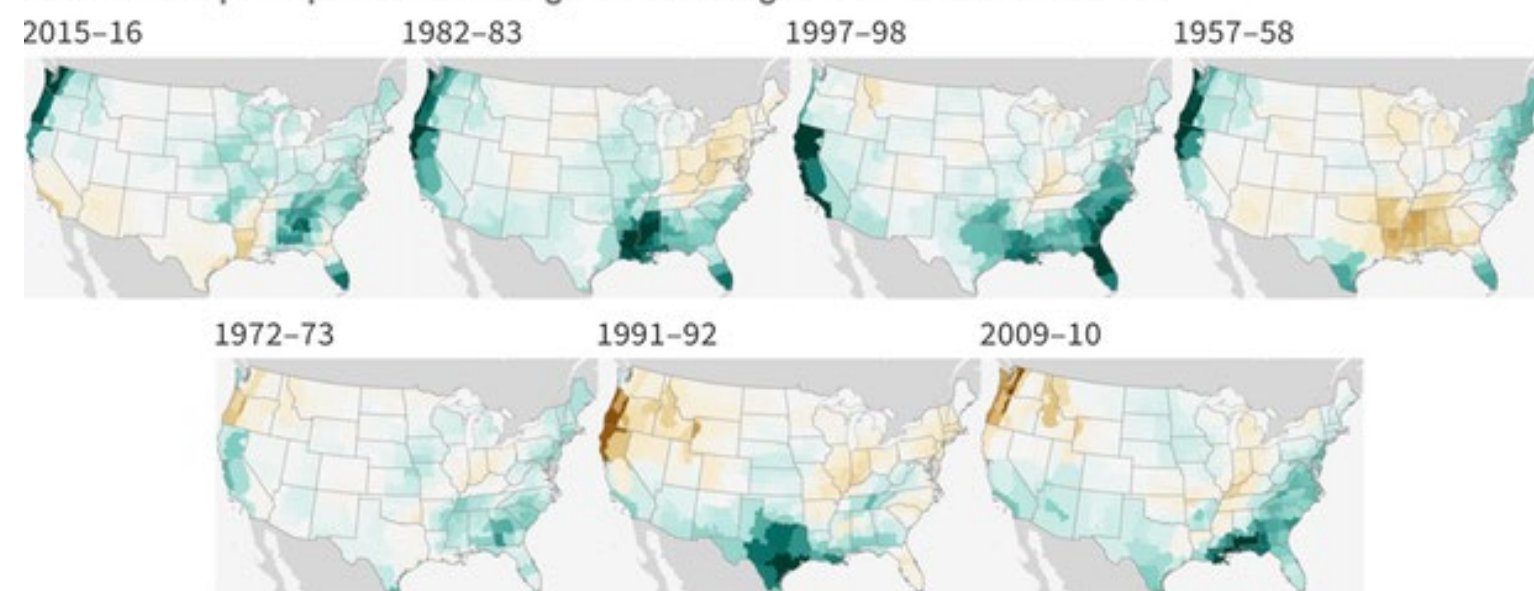
There is now a 54% chance of a "historically strong" El Niño this winter and would potentially be in the top 5 of El Niño events since 1950

While stronger El Niño events increase the likelihood of El Niño-related climate anomalies, it DOES NOT imply expected impacts will emerge in all locations or be of strong intensity



October 2023 compared to 1985-1993*
Difference from average temperature (°F)
-9 0 9
Climate.gov/NNVL
Data: Coral Reef Watch

U.S. winter precipitation during the 7 strongest El Niños since 1950



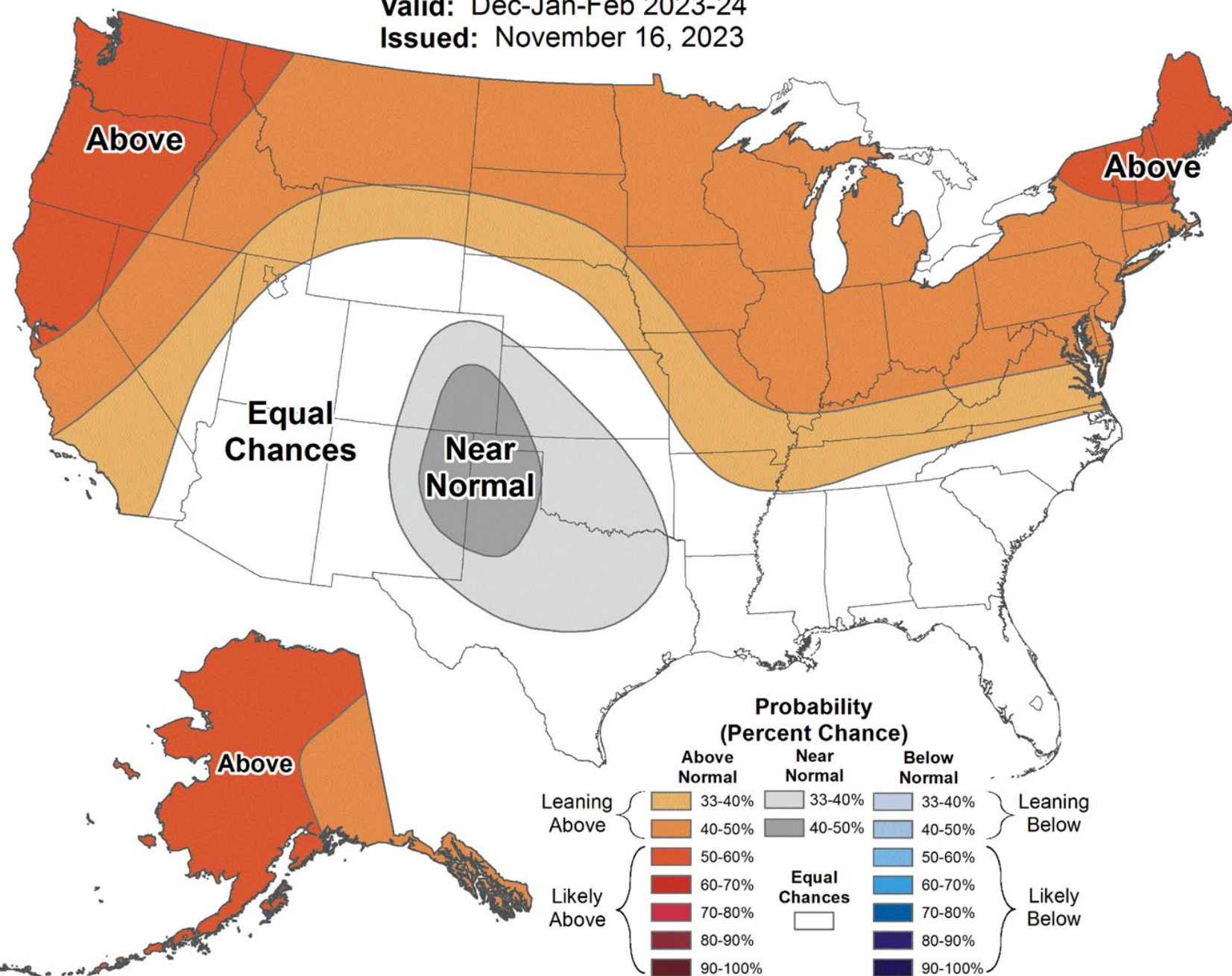
December-February compared to 1981-2010
difference from average precipitation (in)
-12 0 12
NOAA Climate.gov
Data: ESRL/NCEI



Seasonal Temperature Outlook



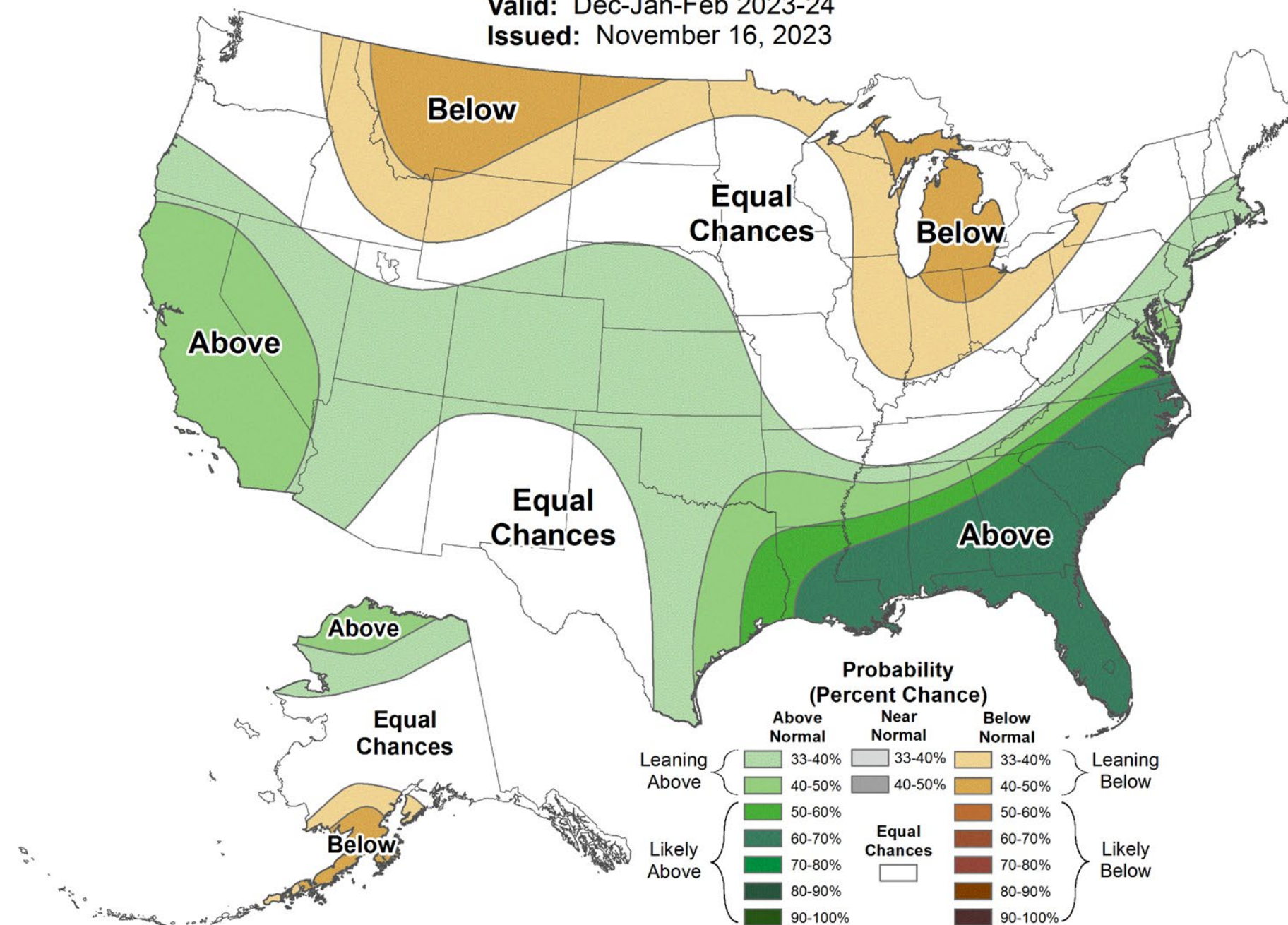
Valid: Dec-Jan-Feb 2023-24
Issued: November 16, 2023



Seasonal Precipitation Outlook



Valid: Dec-Jan-Feb 2023-24
Issued: November 16, 2023





8-14 Day Outlook - Dec. 26th thru Jan 1st

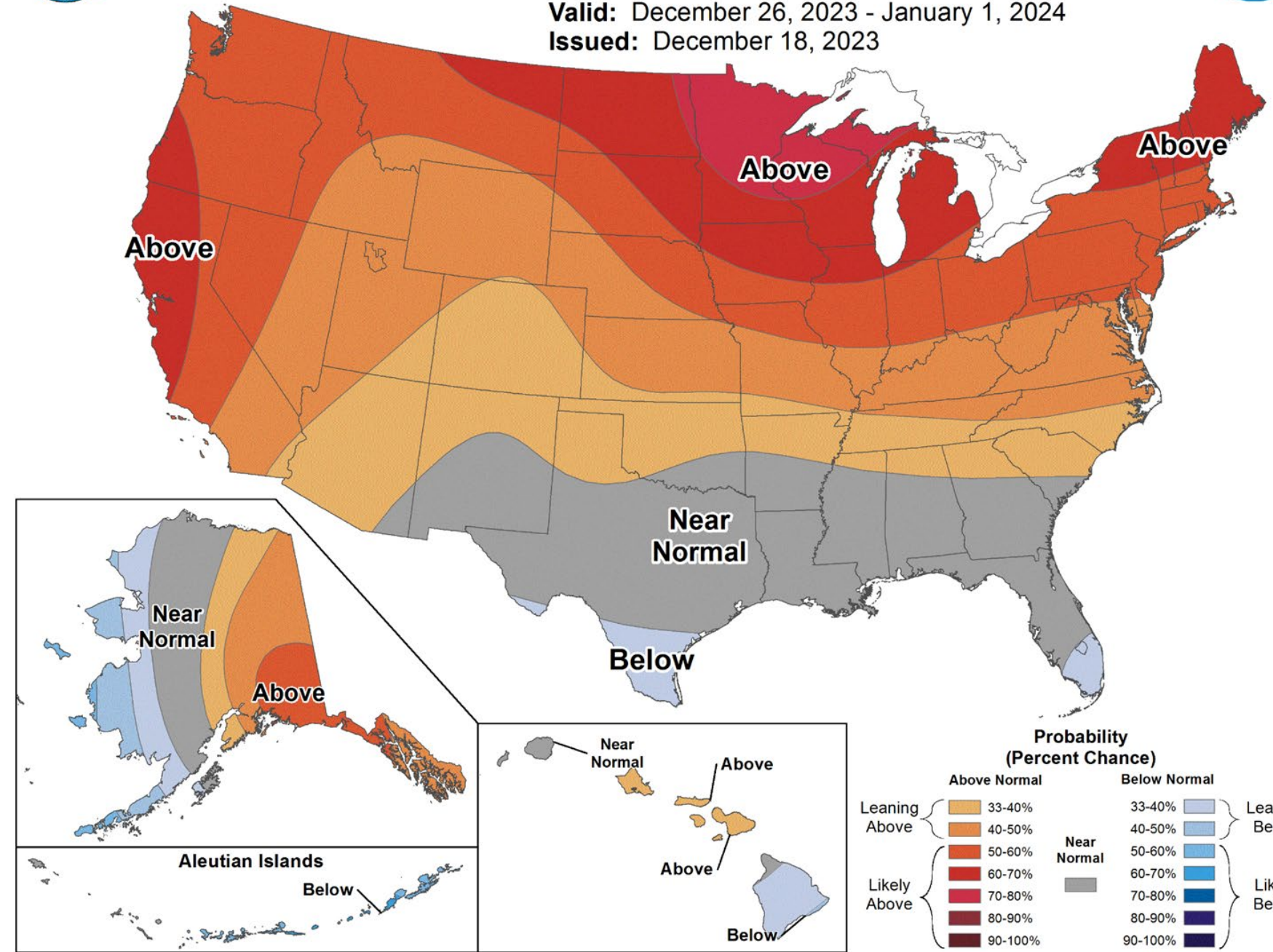
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8-14 Day Temperature Outlook



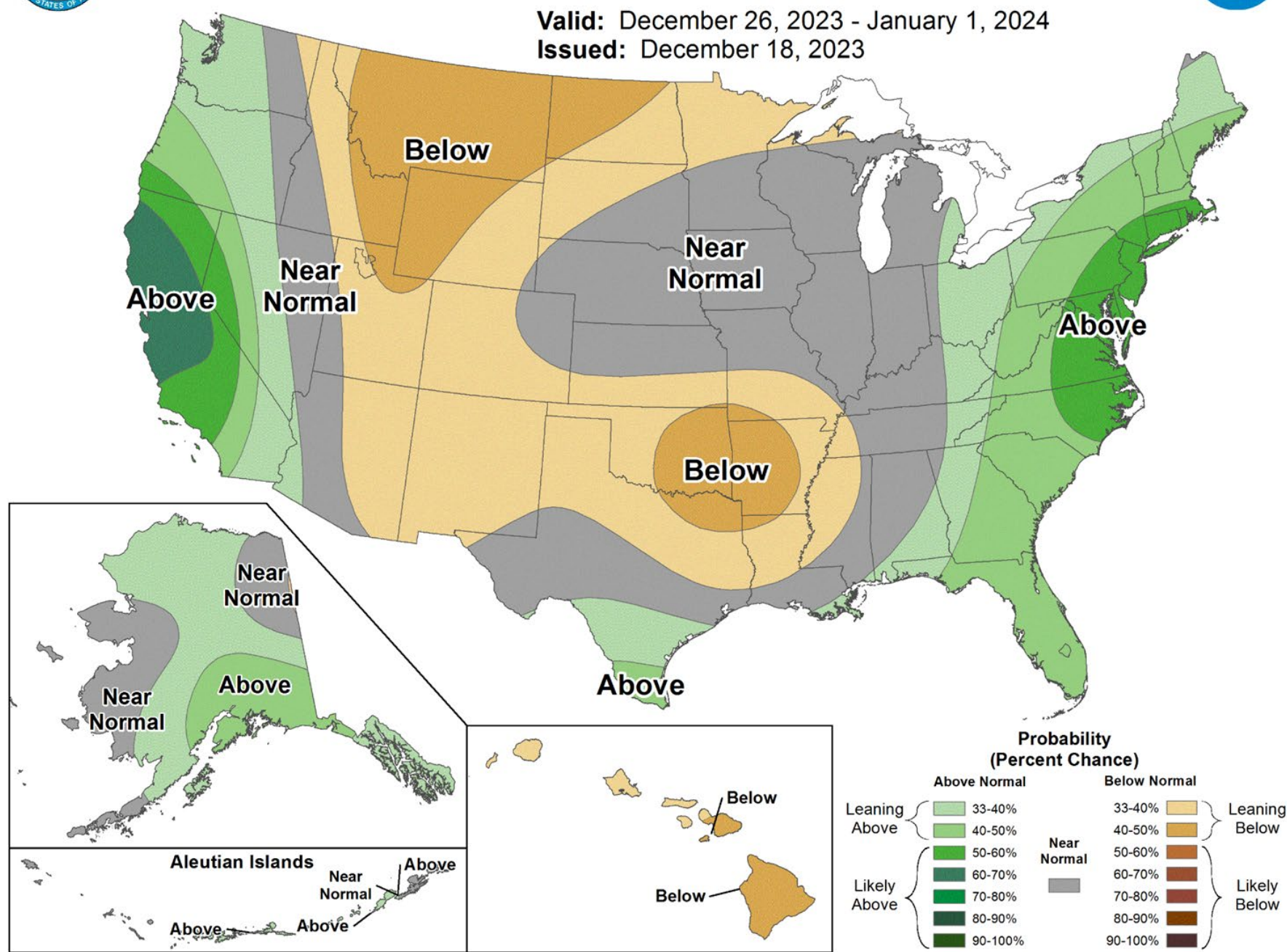
Valid: December 26, 2023 - January 1, 2024
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8-14 Day Precipitation Outlook



Valid: December 26, 2023 - January 1, 2024
Issued: December 18, 2023



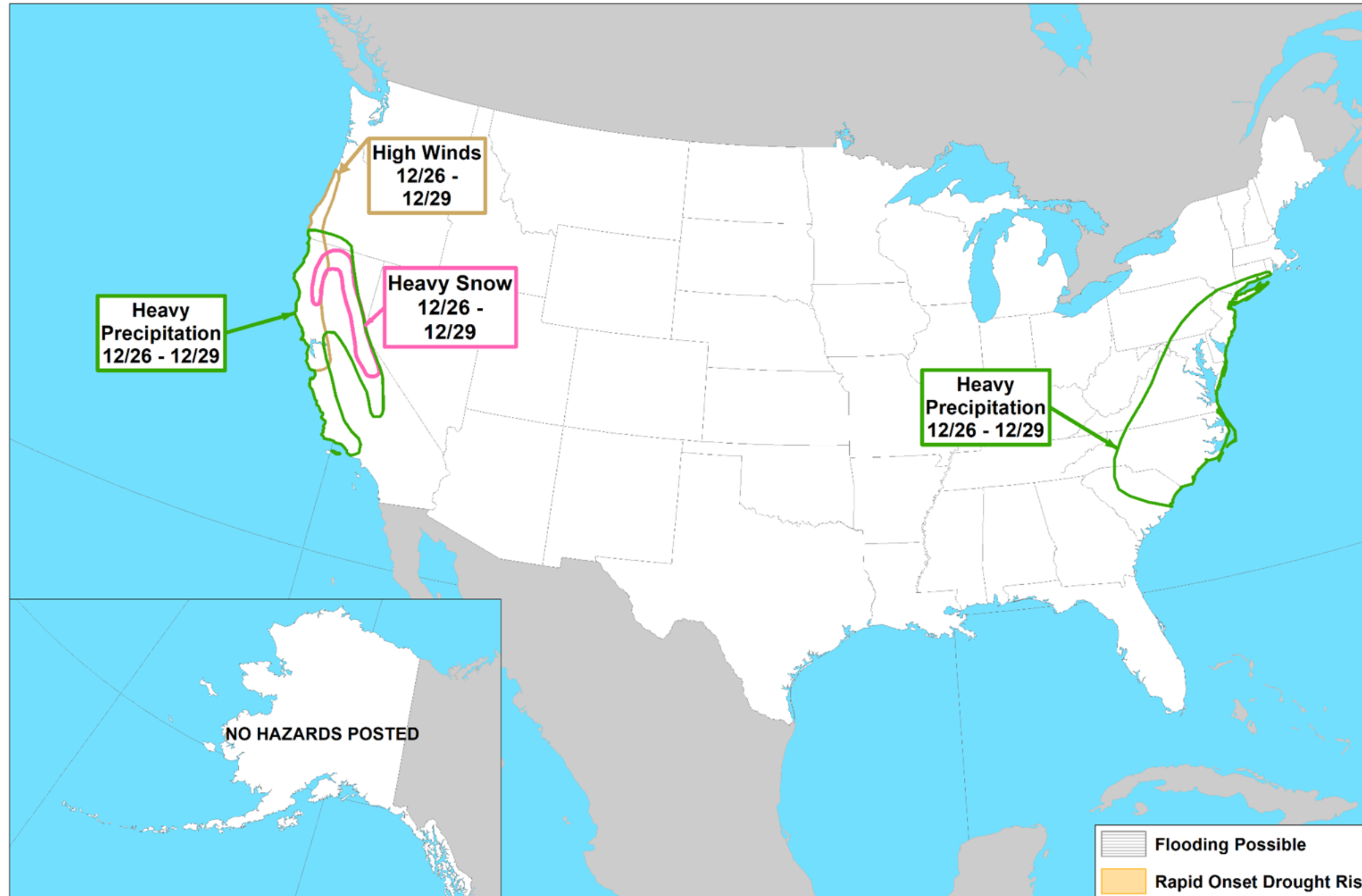


Hazard Risks: Composite Outlook

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Day 8-14 U.S. Hazards Outlook Valid: 12/26/2023-01/01/2024



Climate Prediction Center

Made: 12/18/2023 3PM EST

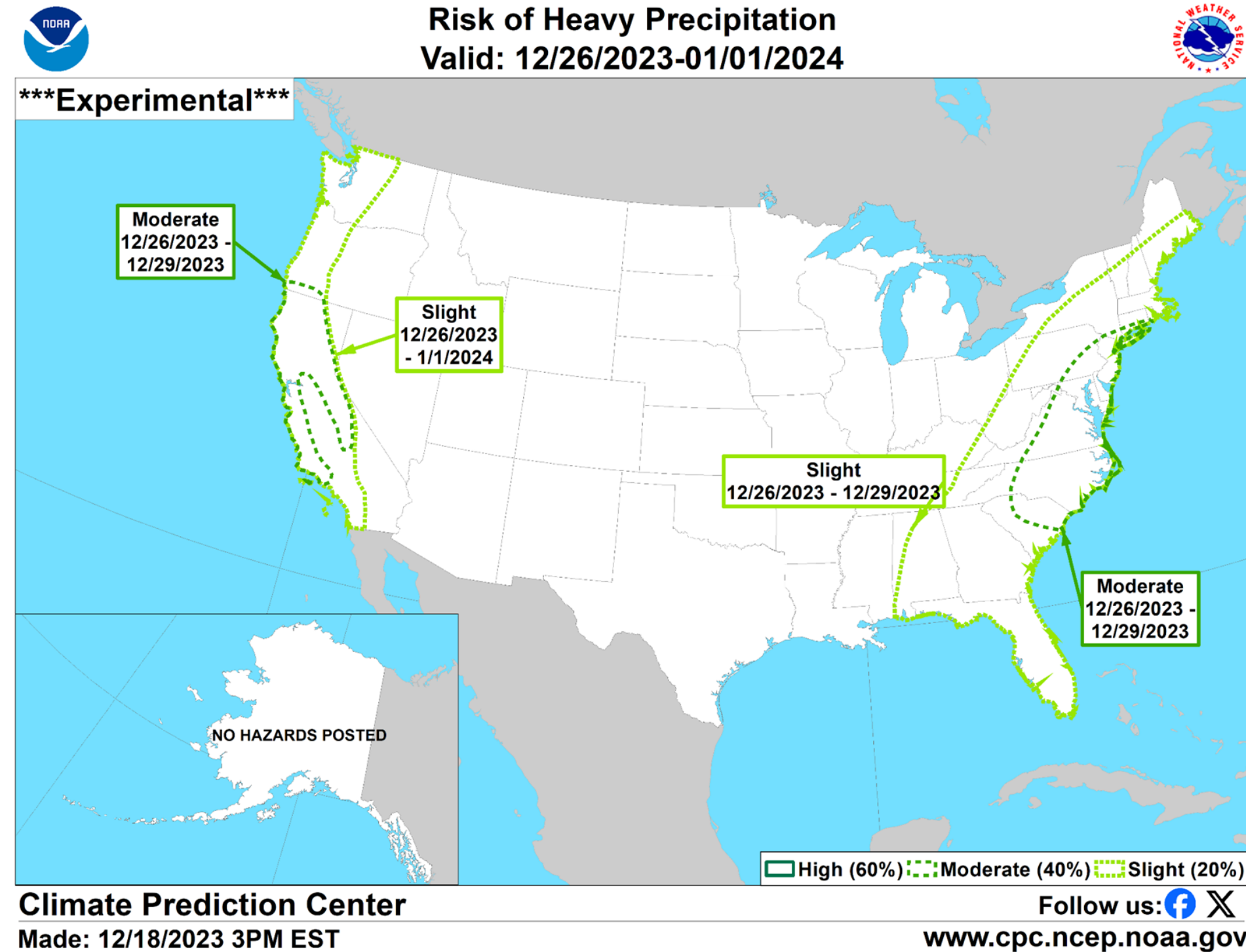
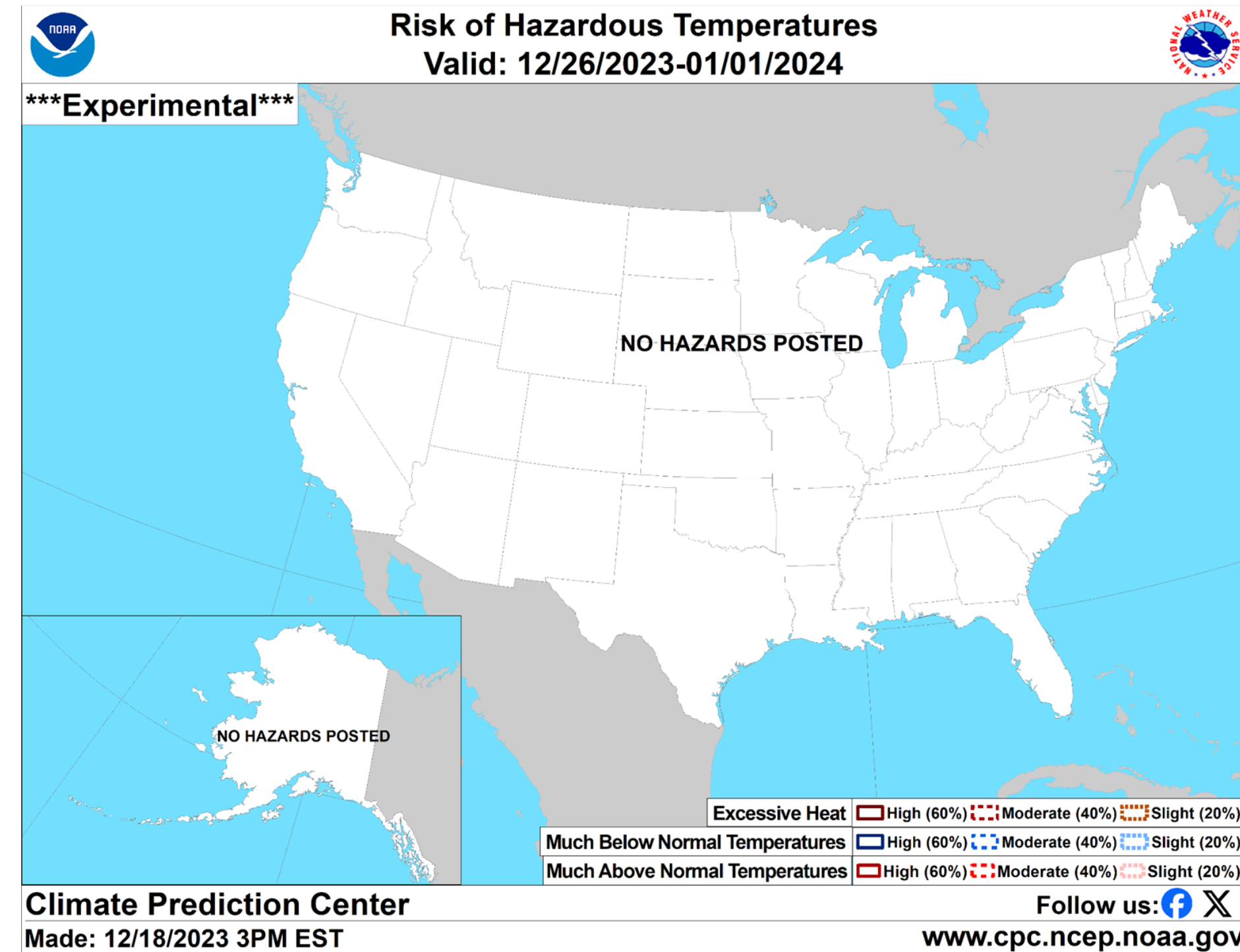
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Hazard Risks: Temperatures and Precipitation

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Hazard Risks: Wind and Snow

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Risk of High Winds Valid: 12/26/2023-01/01/2024

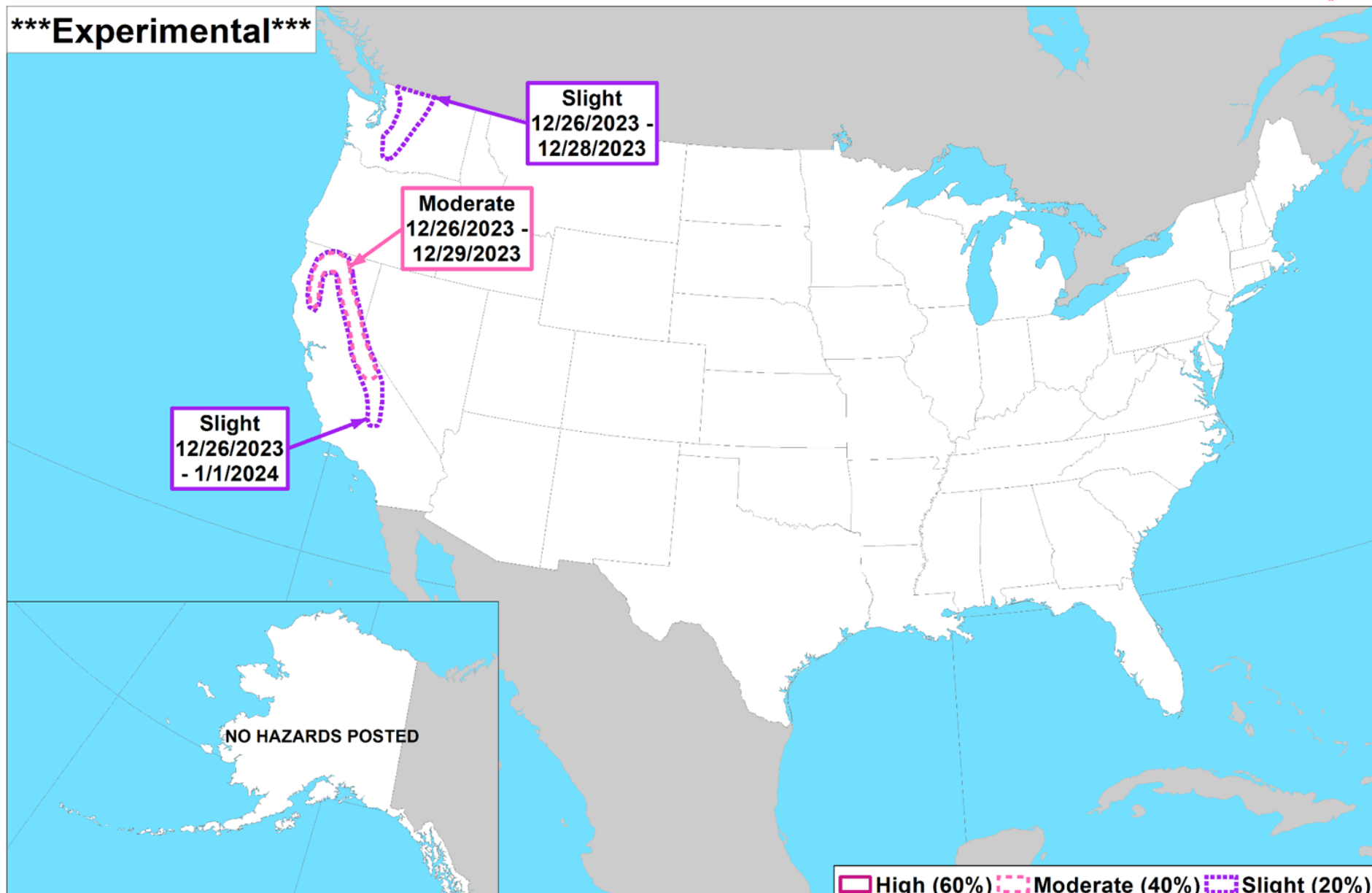
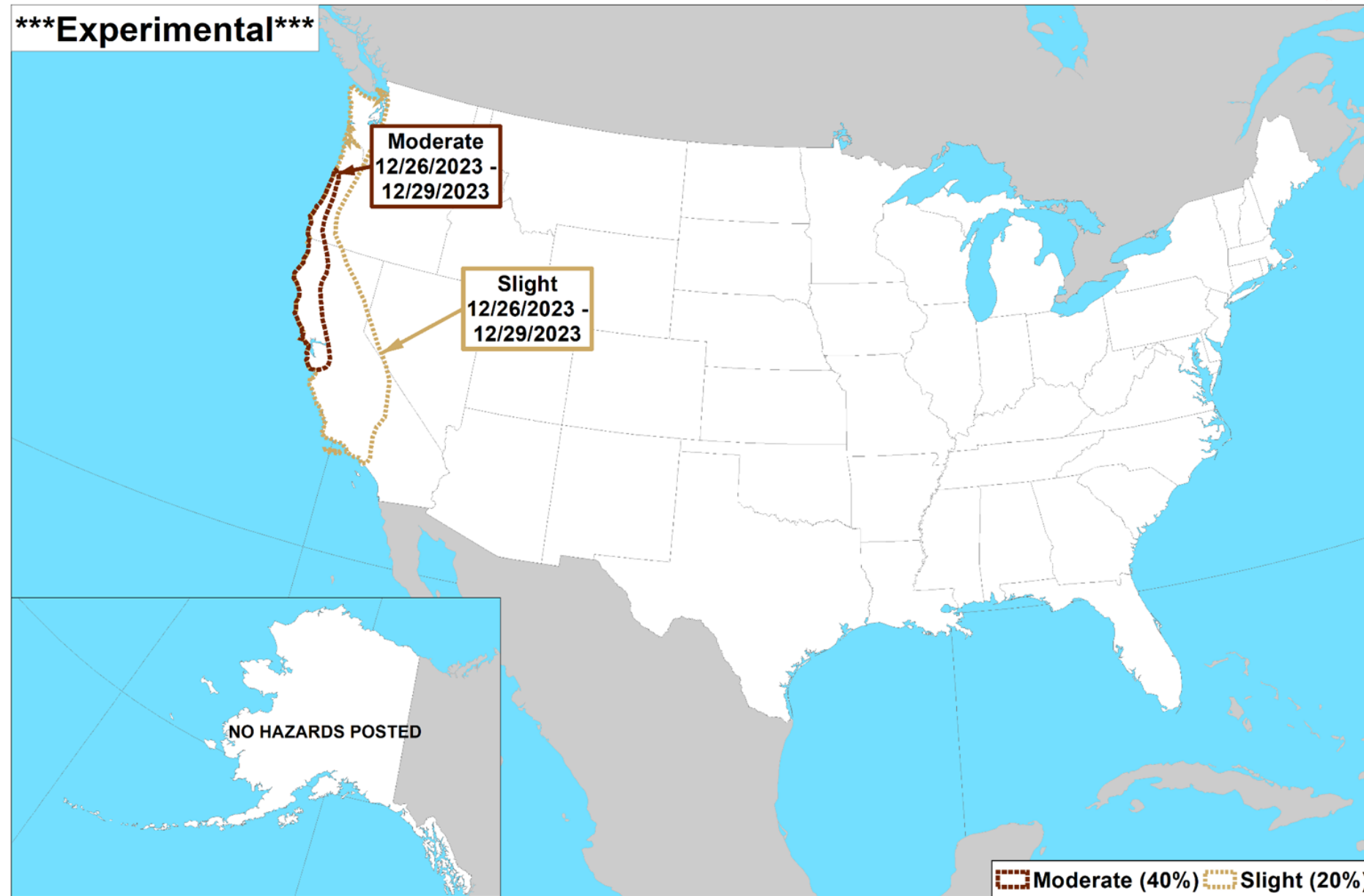


Risk of Heavy Snow Valid: 12/26/2023-01/01/2024



Experimental

Experimental



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Wildfire Forecast and Threat Intelligence Integration Center

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- Near-Term**
- Mid-Term
- Long-Term**
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WILDFIRE FORECAST & THREAT INTELLIGENCE INTEGRATION CENTER

The Wildfire Forecast & Threat Intelligence Integration Center (WFTIIC) serves as California's integrated central organizing hub for wildfire forecasting, weather information, threat intelligence gathering, analysis and dissemination. WFTIIC also coordinates wildfire threat intelligence and data sharing among federal, state, local agencies, tribal governments, utilities, other service providers, academic institutions and nongovernmental organizations.

Active Weather Watches and Incidents

Fire Weather Watches



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Red Flag Warnings



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Active Fires



WFTIIC Tracked - IRWIN Sourced
Last update: 1 minute ago

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Near Term:

Daily Intelligence Product

Integrates different sources into a combined one-page information sheet for quick assessment of daily fire potential

Long Term:

Four Month Outlook

Issued on a monthly basis



Contact Information

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