OREGON WINE

SYMPOSIUM

February 3 & 4, 2025

Climatology Report

Greg Jones, Abacela Vineyards and Winery

PROGRAM PRODUCER oregon wine BOARD

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Talk Outline

- Review of 2024 Global to Regional Conditions
- Current Conditions
- Winter to Spring Forecast

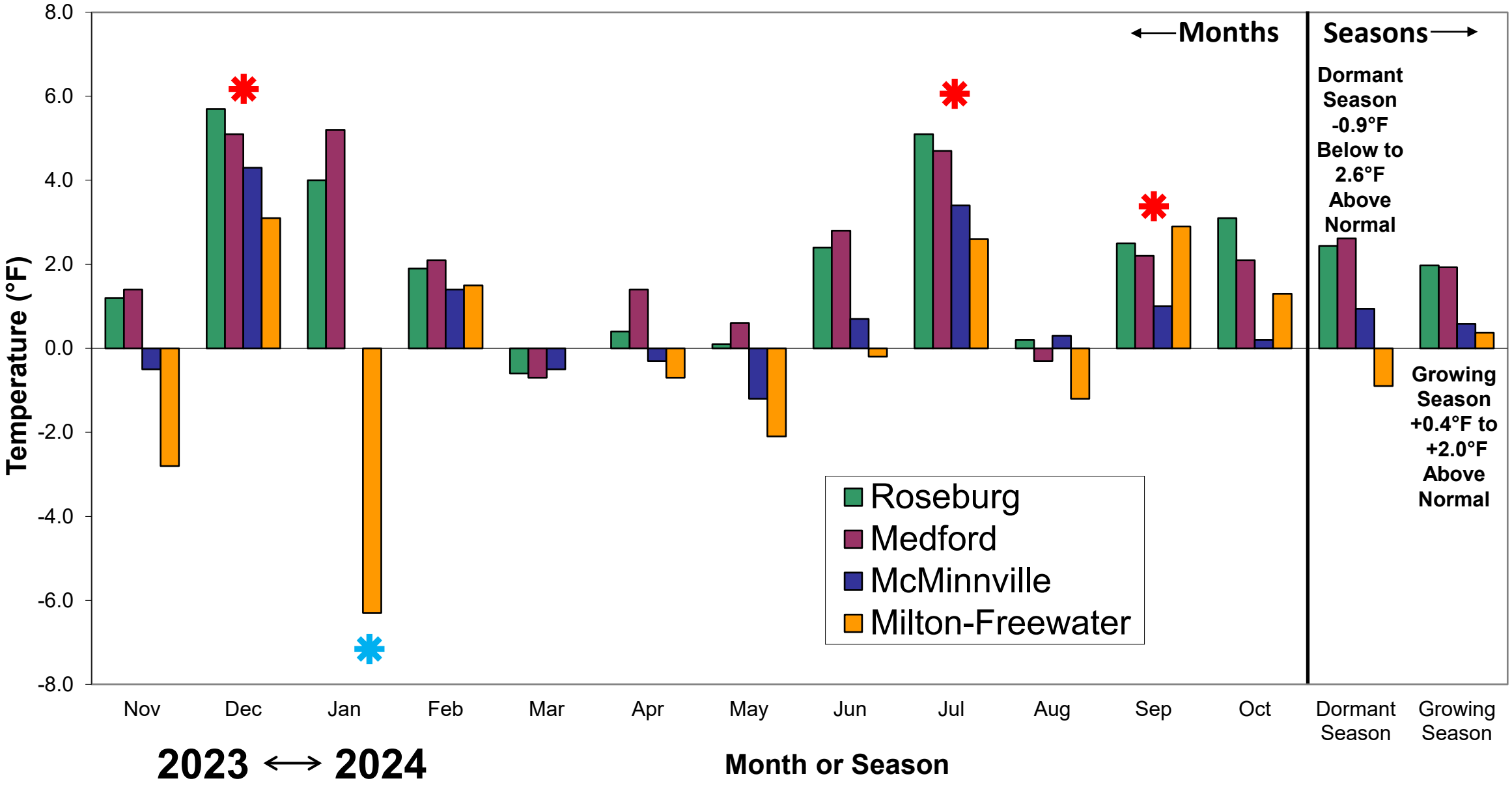
https://www.climateofwine.com/presentations

2024 General Climate Summary

- Globally warmest year on record (+2.88°F)
- Oceans heat content at all time high
- Arctic and Antarctica all time highs
- CONUS warmest year on record (+3.51°F)
- Tmin up slightly more than Tmax
- CONUS slightly wetter than average
- Large differences across the country
- Entire country at or above average GDD

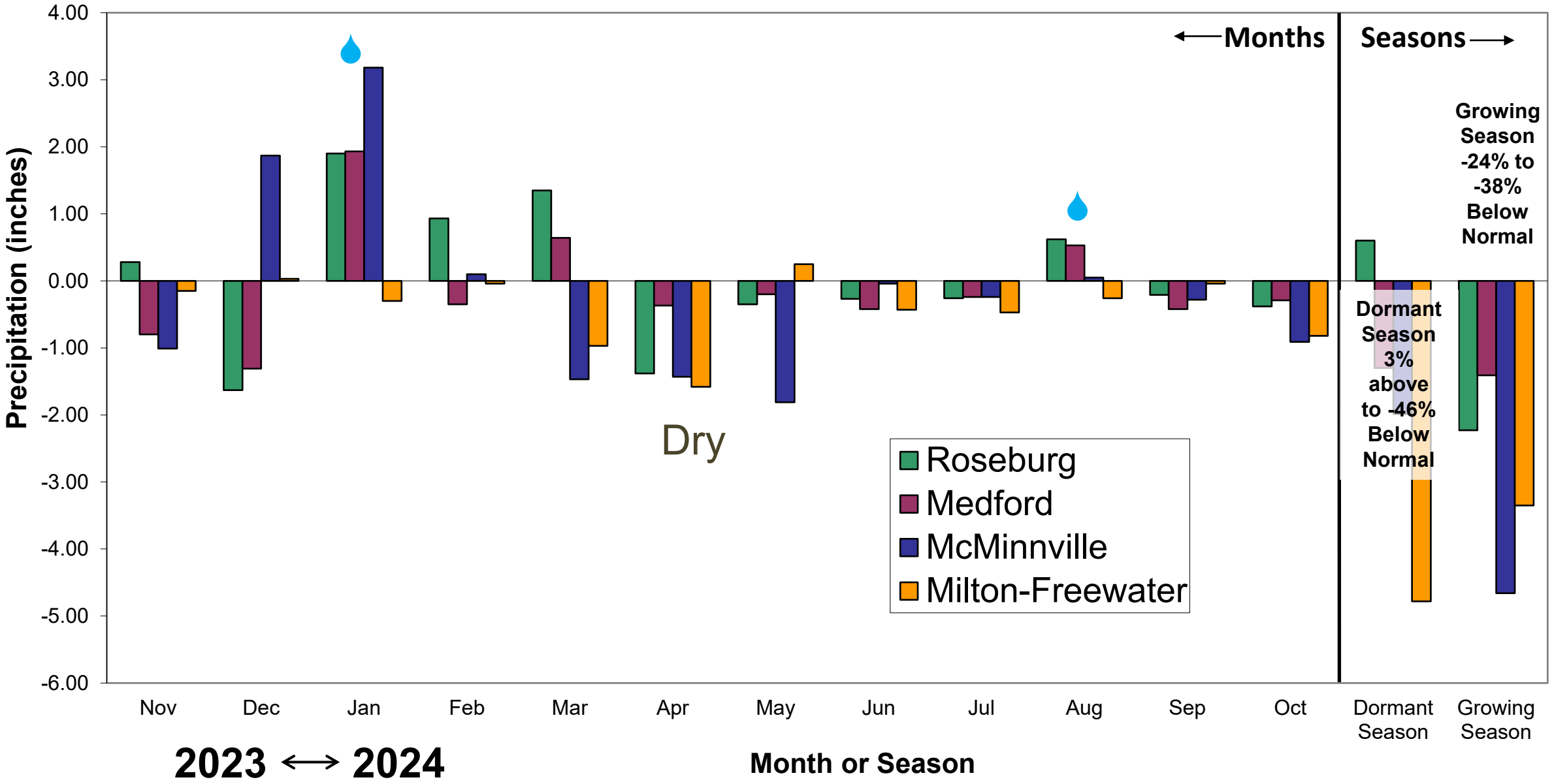
Oregon 2023-24
Weather/Climate Summary

2023-24 Regional Temperature Departures from Normal



Summation of daily temperature departures by month, the dormant period (Nov-Mar) and the growing season (Apr-Oct) compared to the 1991-2010 climate normals from the NWS stations (www.noaa.gov)

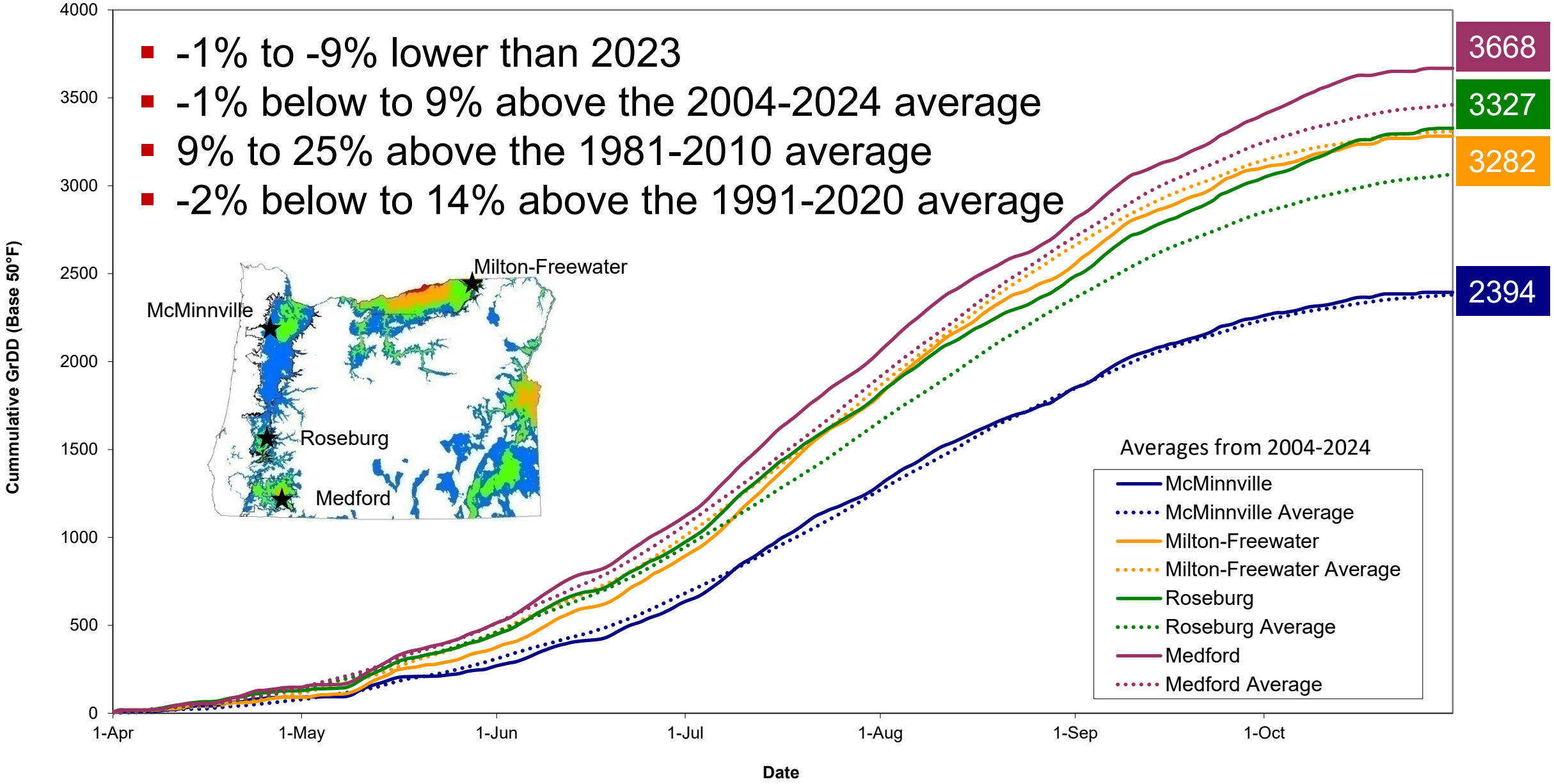
2023-24 Regional Precipitation Departures from Normal



Summation of daily precipitation departures by month, the dormant period (Nov-Mar) and the growing season (Apr-Oct) compared to the 1991-2010 climate normals from the NWS stations (www.noaa.gov)

2024 Growing Season Cumulative Degree-Days

- -1% to -9% lower than 2023
- -1% below to 9% above the 2004-2024 average
- 9% to 25% above the 1981-2010 average
- -2% below to 14% above the 1991-2020 average

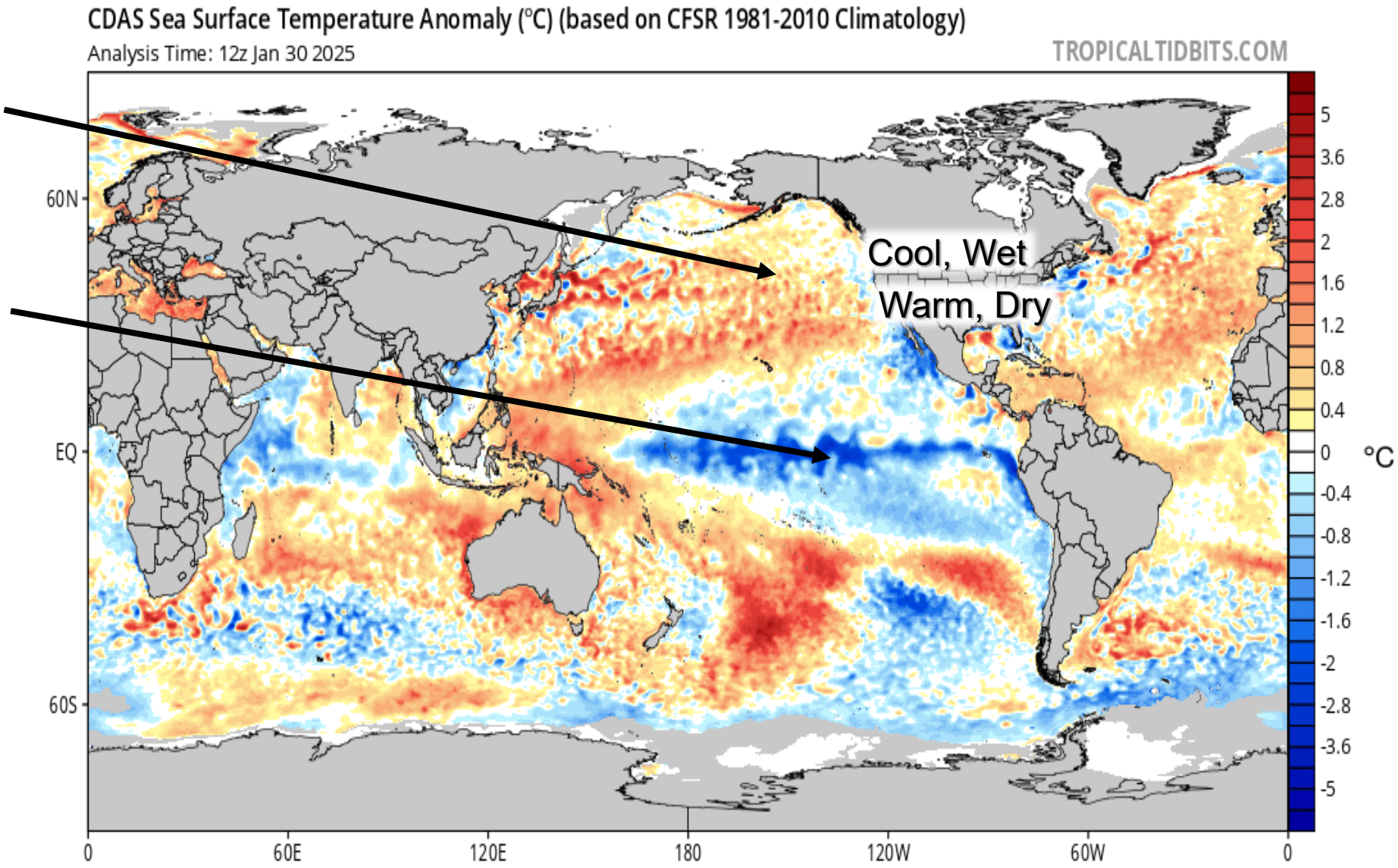


This chart represents the 2022 cumulative growing degree-days compared to the average for 2004-2022 for the growing season (Apr-Oct) from the NWS stations (www.noaa.gov)

Current Conditions

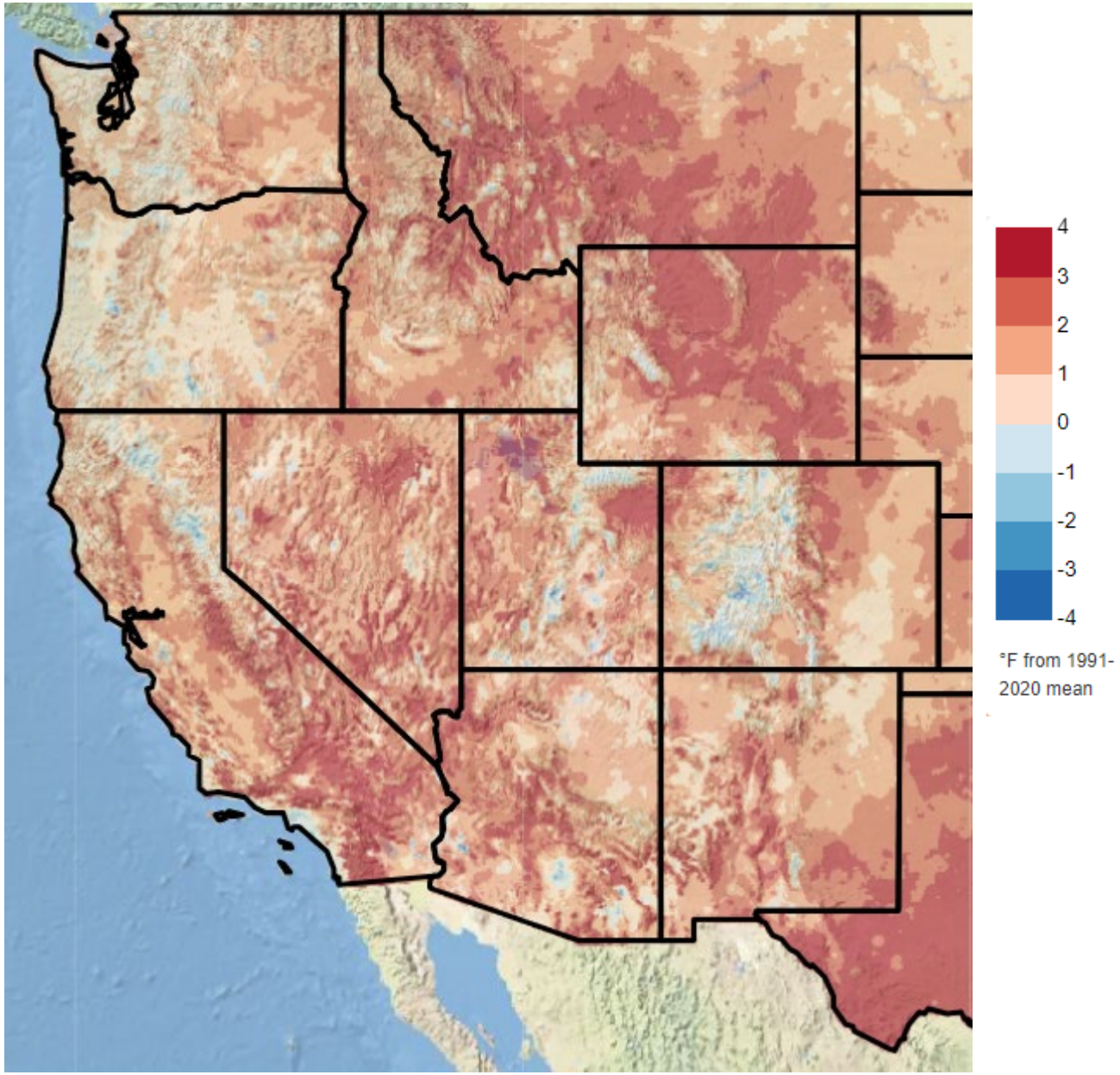
Current Sea Surface Temperatures

- Continued strong negative PDO conditions in the North Pacific
- Tropics now in a La Niña, but likely a weak, short duration event
- PDO-La Niña appear to be more in phase over the winter
- Most forecasts are pointing to the PNW being cool and wet



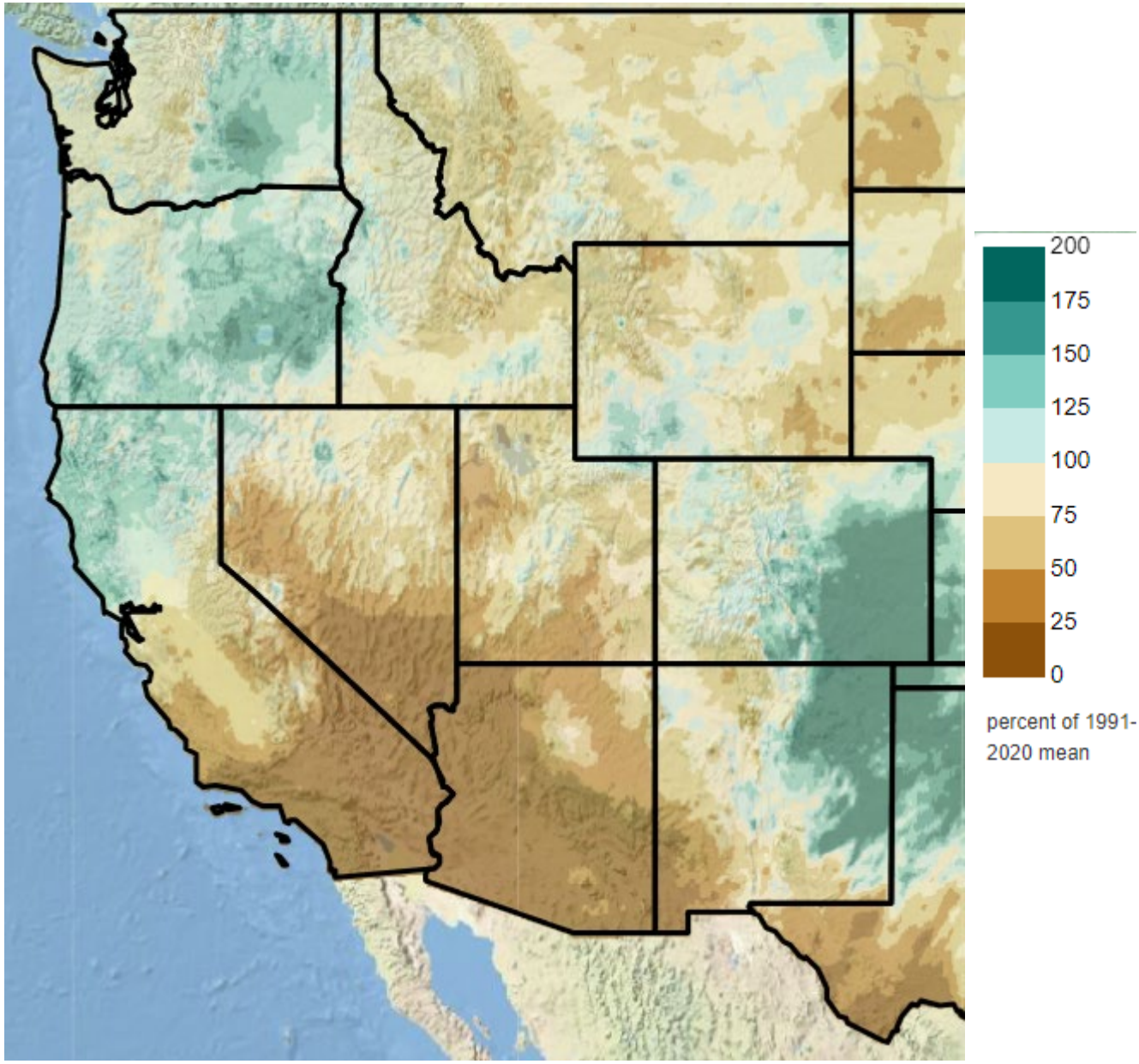
- Temperatures close to those expected from a weak La Niña winter, large influence from the North Pacific driving the differences

Water Year Mean Temperature Departure from Normal
October 1, 2024 to January 30, 2025

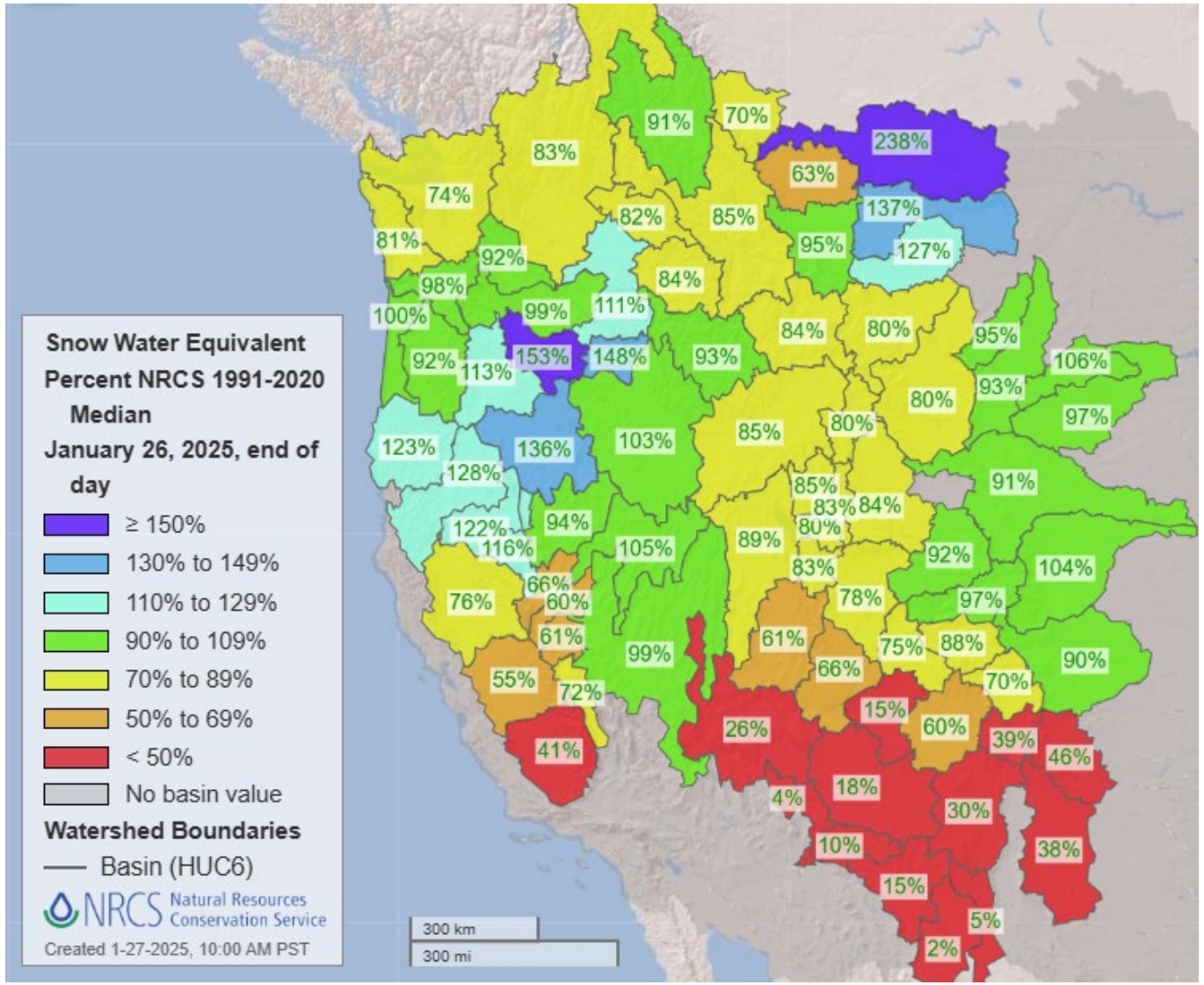


- Temperatures close to those expected from a weak La Niña winter, large influence from the North Pacific driving the differences
- General pattern of wet north, dry south typical of a La Niña winter

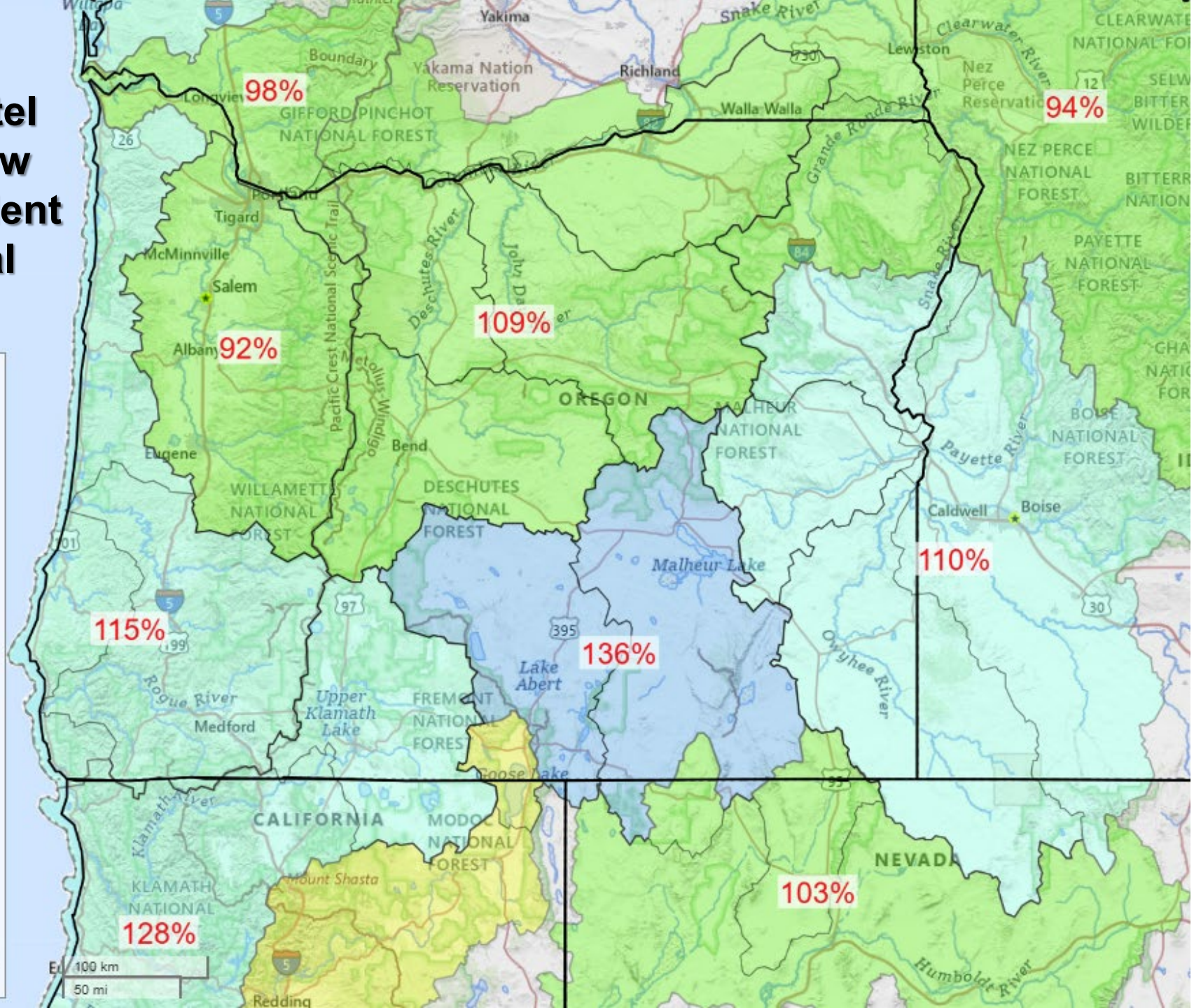
Water Year Precipitation Percent of Normal
October 1, 2024 to January 30, 2025



- Temperatures close to those expected from a weak La Niña winter, large influence from the North Pacific driving the differences
- General pattern of wet north, dry south typical of a La Niña winter
- Mixed SWE situation across the west, dry January lowering amounts for many



Oregon Snotel Current Snow Water Equivalent % of Normal



Snow Water Equivalent Percent NRCS 1991-2020 Median
January 26, 2025, end of day

- ≥ 150%
- 130% to 149%
- 110% to 129%
- 90% to 109%
- 70% to 89%
- 50% to 69%
- < 50%
- No basin value

Watershed Boundaries

- Subregion (HUC4)
- State Watersheds

Political Boundaries

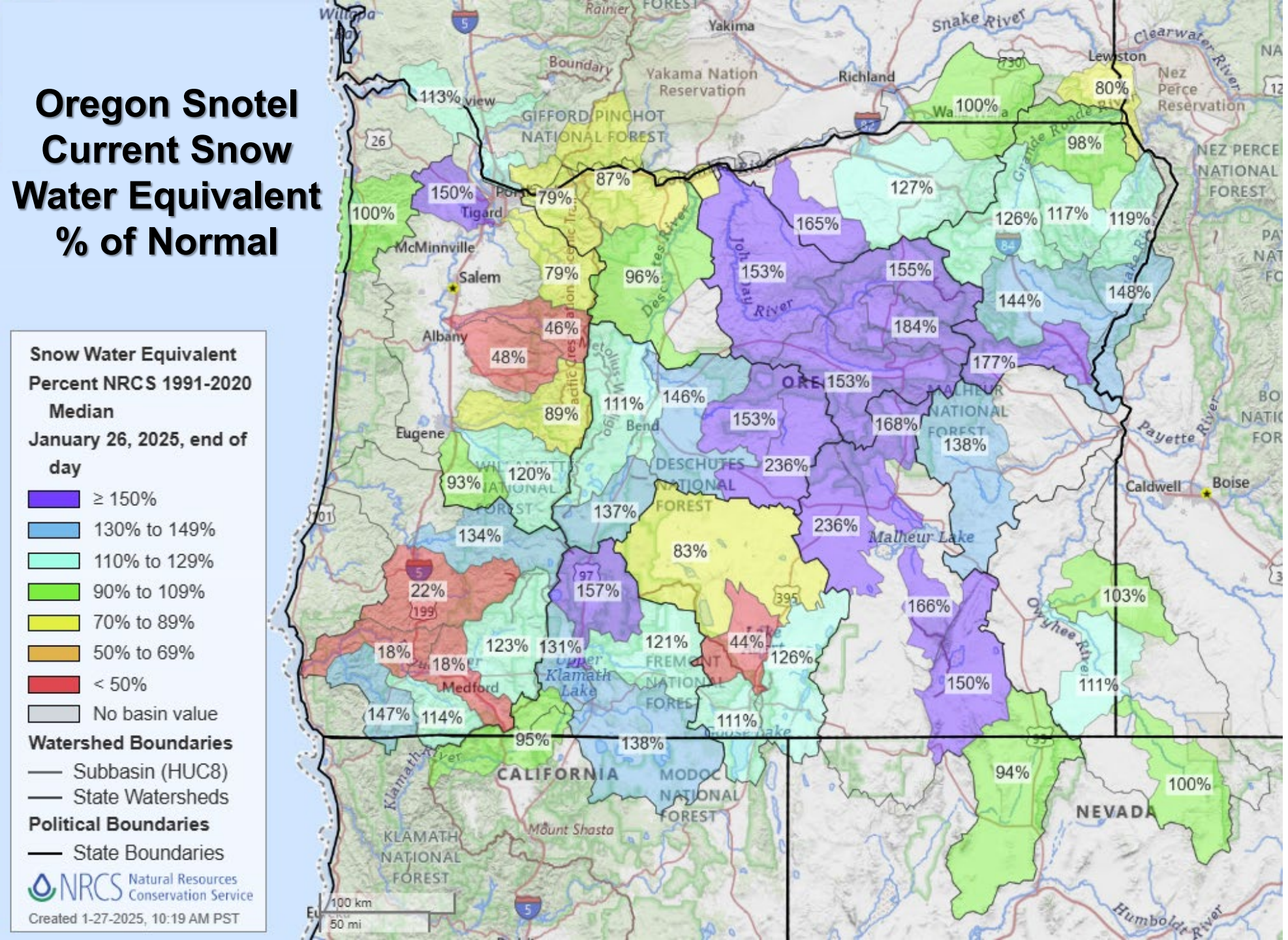
- State Boundaries

NRCS Natural Resources Conservation Service

Created 1-27-2025, 10:14 AM PST

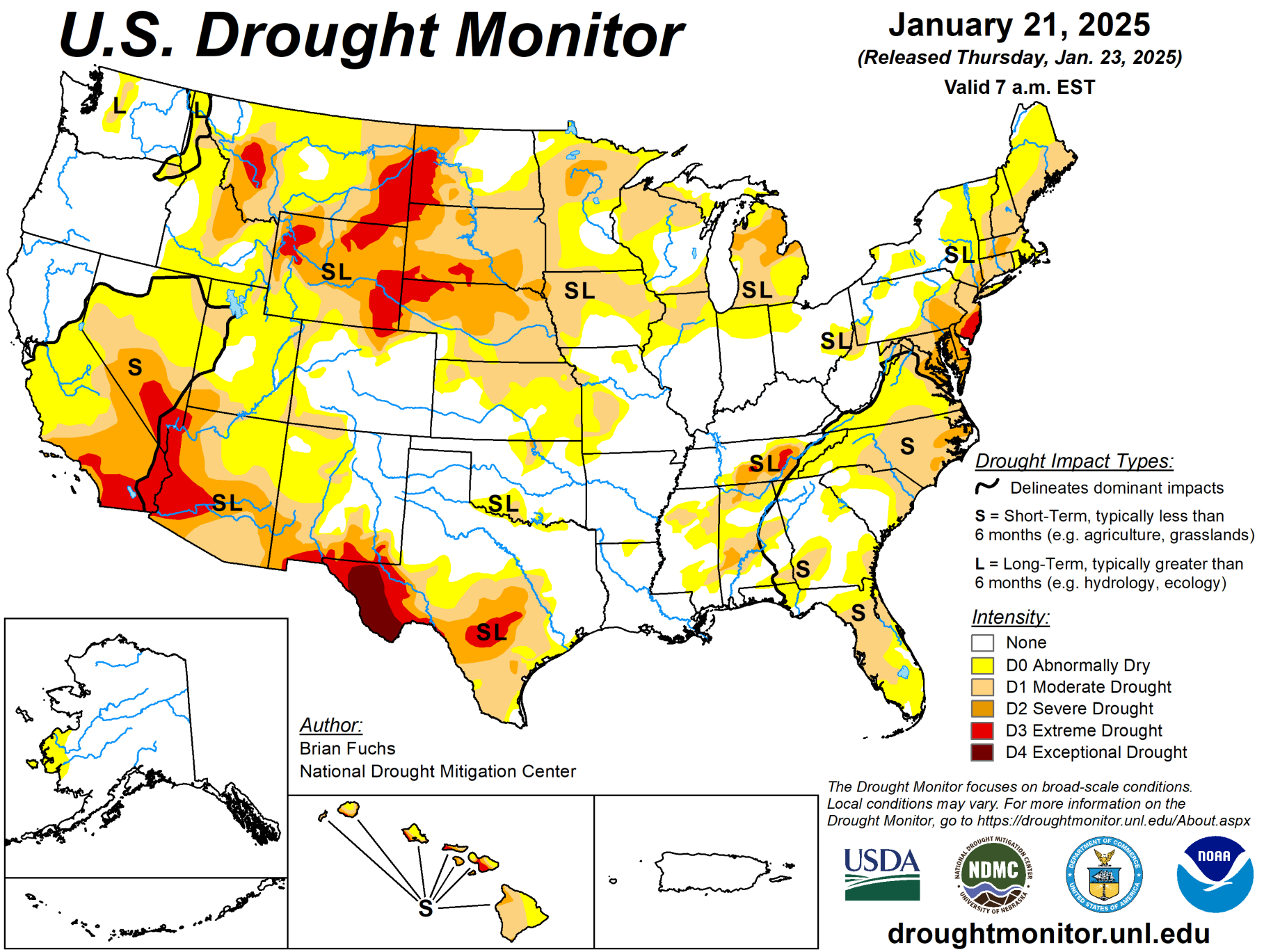
Most of the larger basin averages up over 2023 at this point

Oregon Snotel Current Snow Water Equivalent % of Normal



Unfortunately, a dry January has smaller scale basins showing broad differences across Oregon

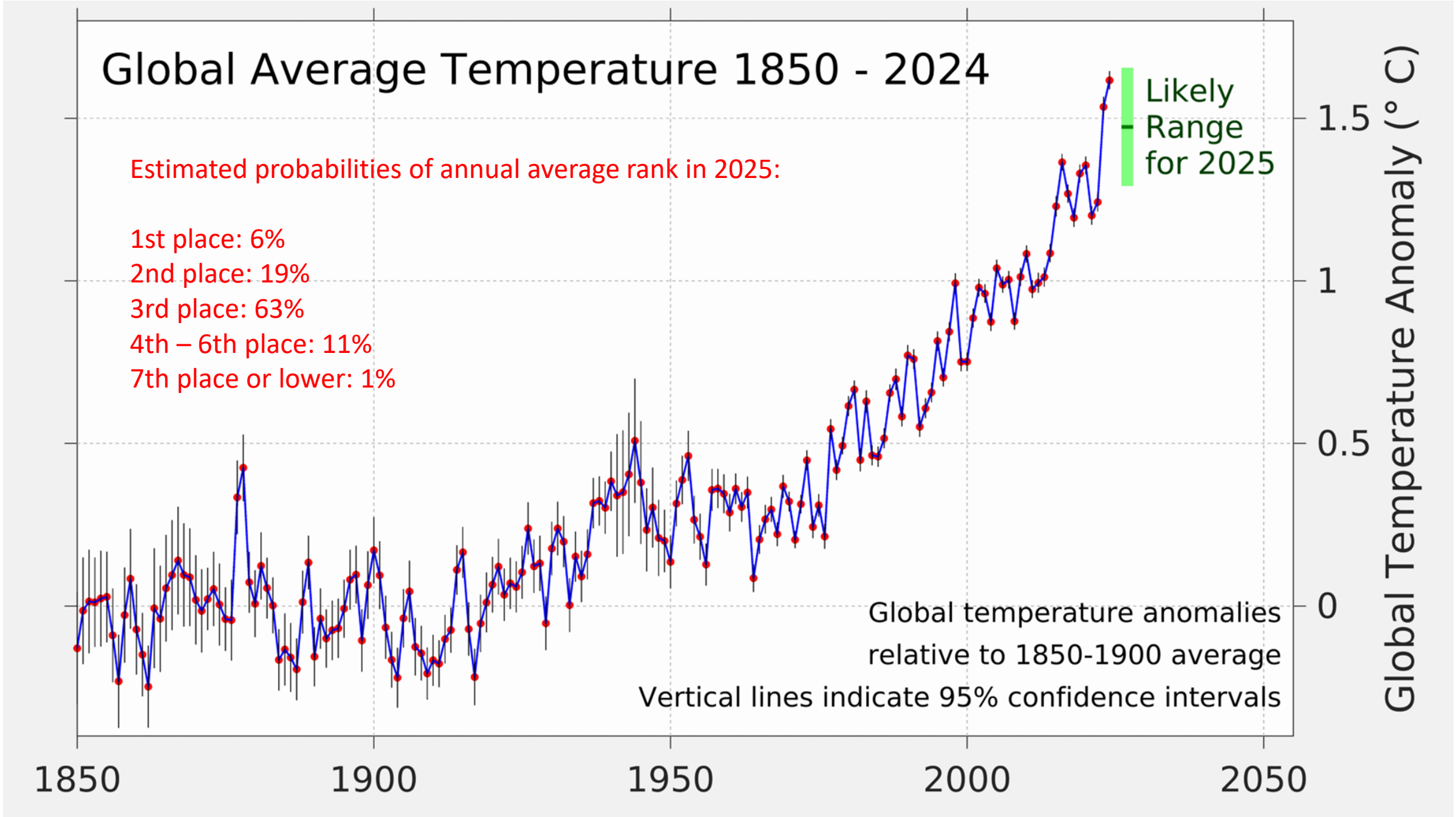
- Drought footprint across CONUS was nearly 90% three months ago, now at 62%
- ~18% of CONUS in severe to exceptional drought
- PNW has recovered, Rockies and southwest have increased



Summary and Forecast

Summary and Forecast

- 2025 likely to end up as a top five warmest year on record globally



Data from Berkeley Earth (www.BerkeleyEarth.org)

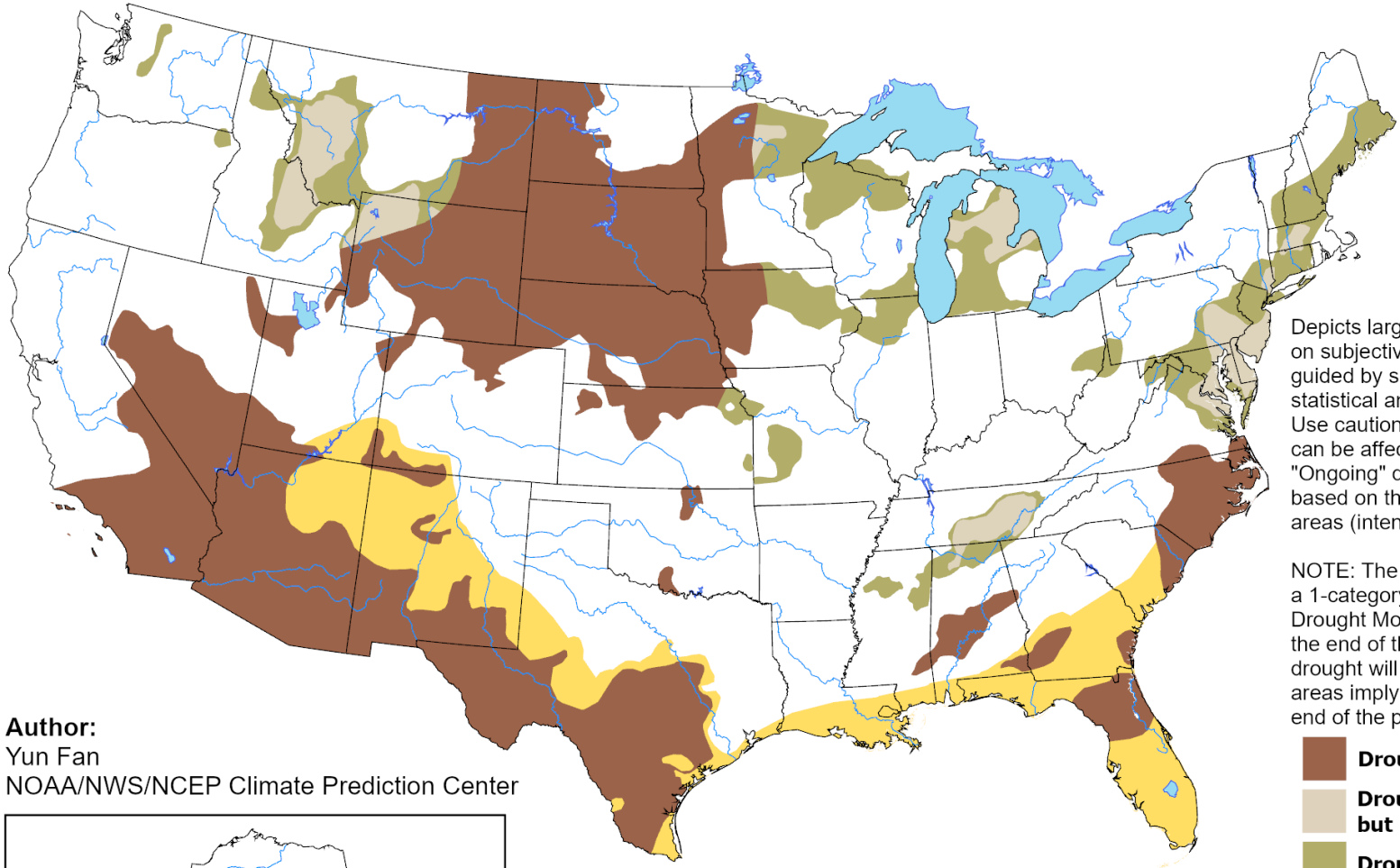
Summary and Forecast

- Spatial extent of drought in the US has contracted in some regions, expanded in others
- Northern California into the PNW likely to stay out of drought for the time being, other western regions not likely to see any improvement

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for January 16 - April 30, 2025
Released January 16, 2025



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- **Drought persists**
- **Drought remains, but improves**
- **Drought removal likely**
- **Drought development likely**
- **No drought**

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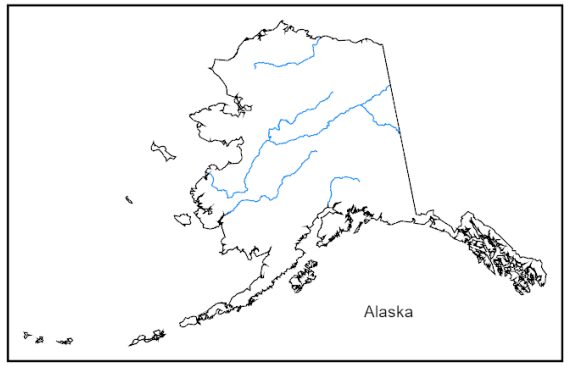
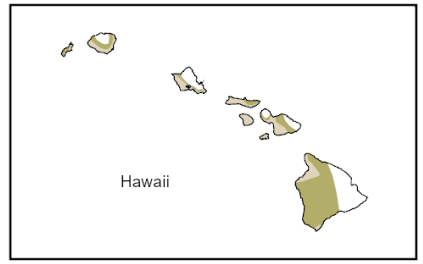
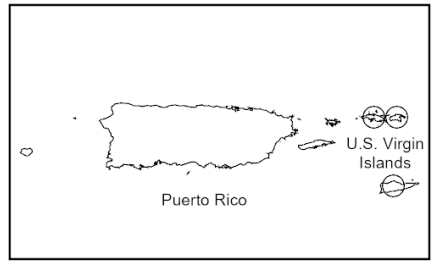


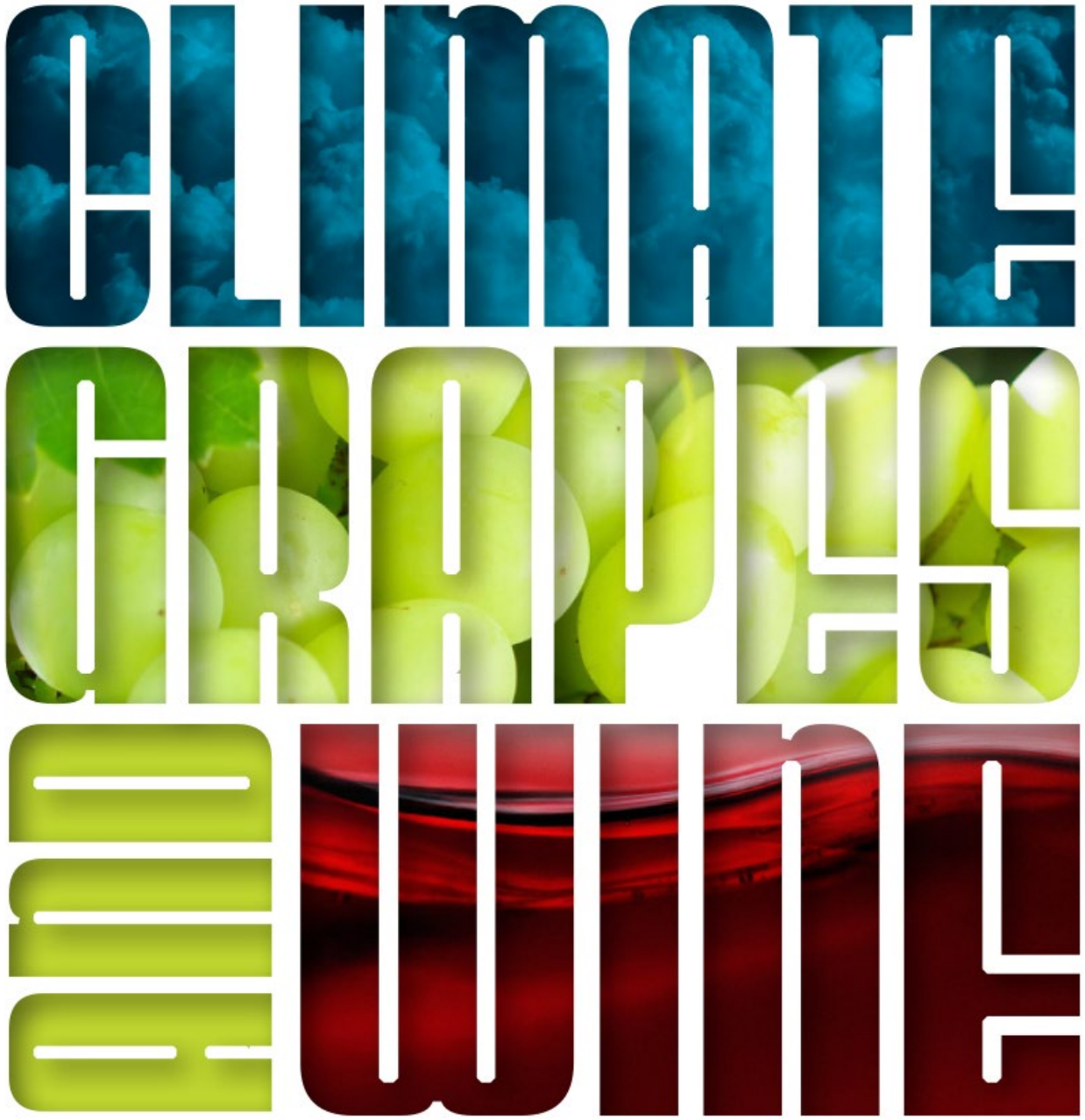




https://go.usa.gov/3eZ73

Winter/Spring Forecast

- La Niña in place but likely a weak and short event
- North Pacific SST likely to stay in a strong negative PDO for most of 2025
- North and Tropical Pacific are in phase, as such …
- Current conditions and forecast models are tilting the odds in favor of;
  - PNW cool to cold and wet over the rest of the winter and likely into the spring
  - California cool to average and likely dry



For my publications, videos, podcasts, etc. visit www.climateofwine.com where you can also find my Monthly Weather-Climate Reports for the western US at www.climateofwine.com/reports

Thank You!

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CEO, Abacela Vineyards and Winery

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