



Looking Forward - Spring & Summer Outlook

Weather Forecast Office
Reno, NV
Monday, April 17

My Mental
State Before
Winter 2023

After
Winter
2023

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Where Have I Heard This Before?

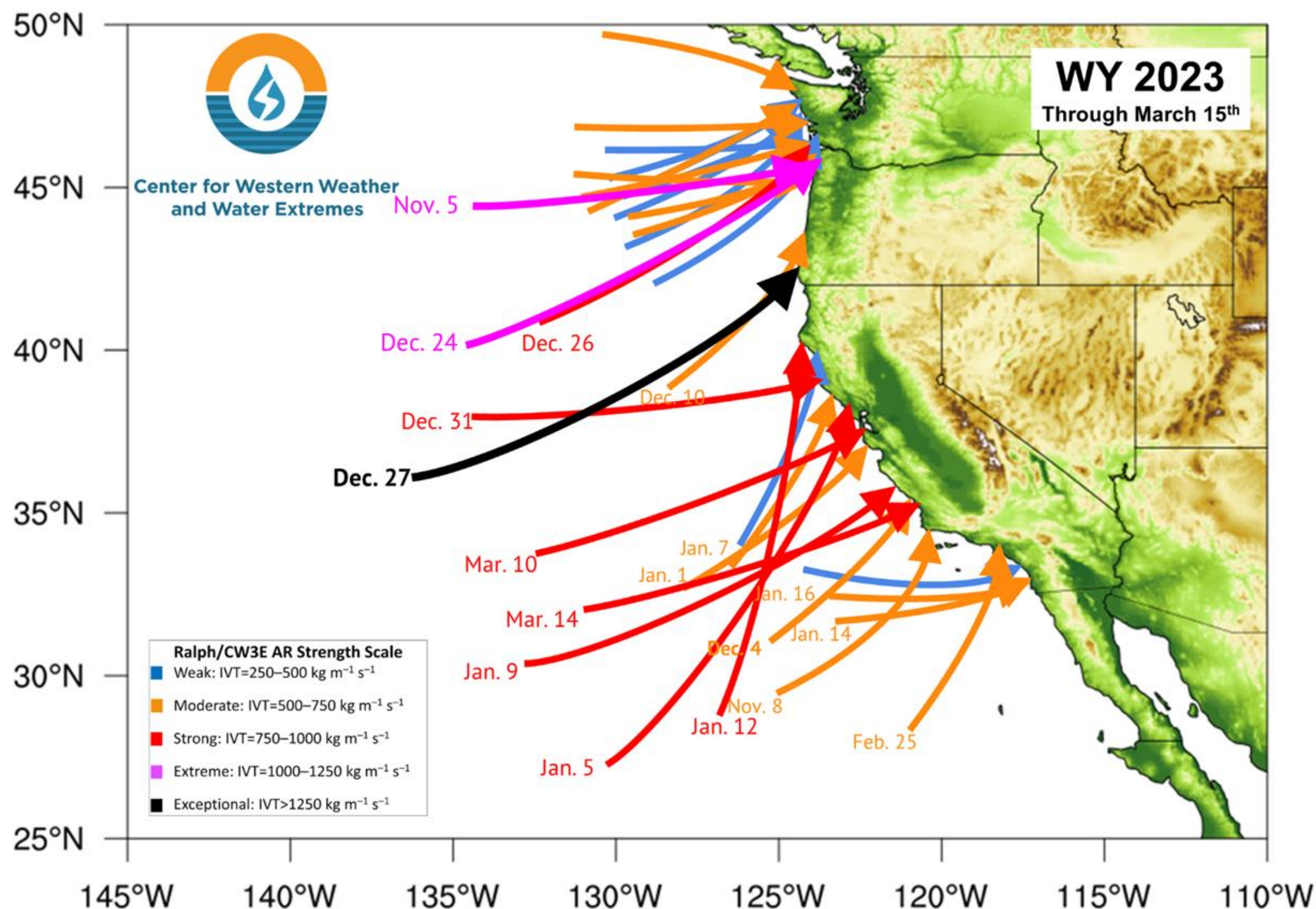
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**Wow! That was a
“once in a career”
winter!**



Winter 2022-23 - Wet & Prolonged Cold

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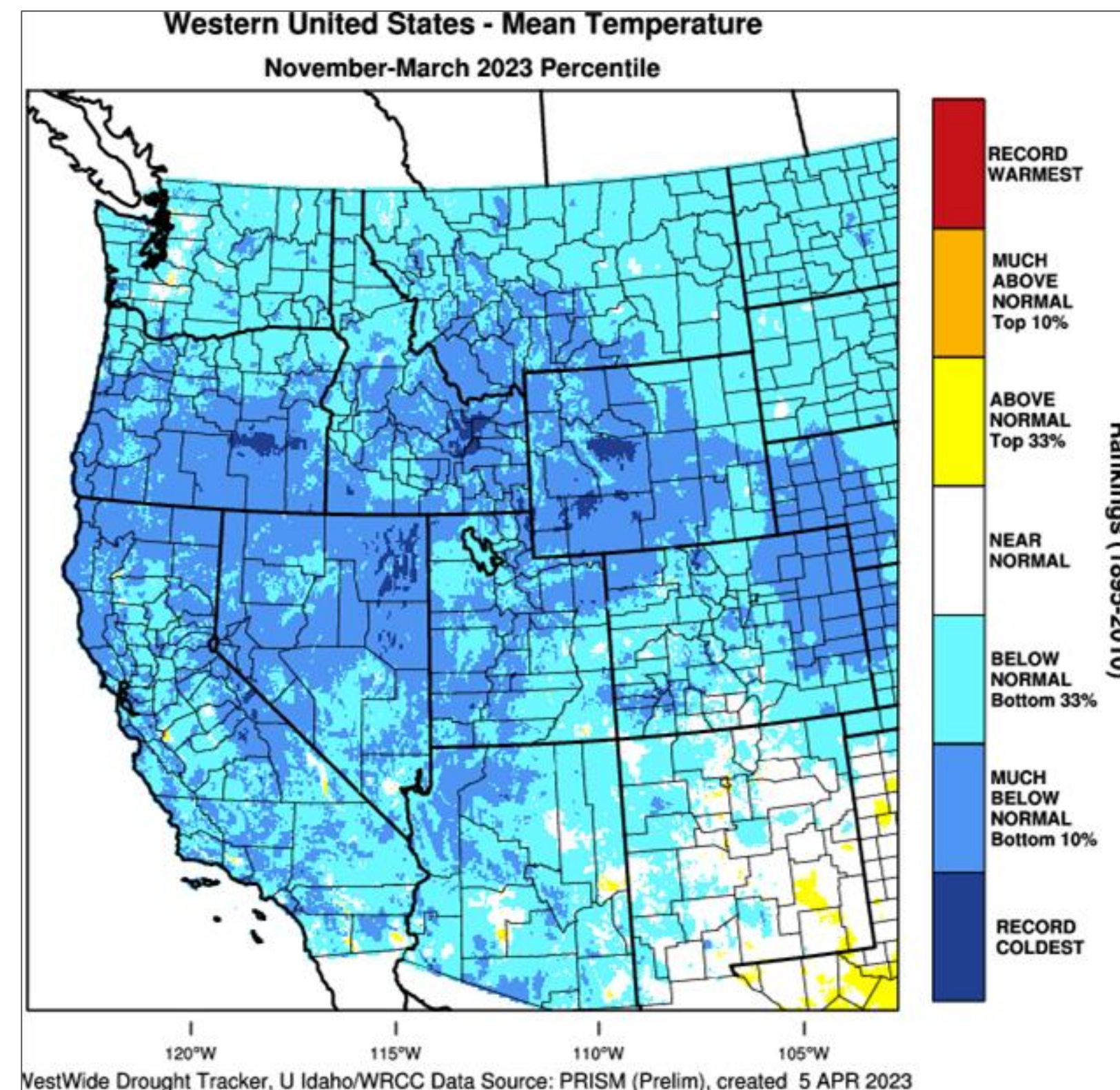
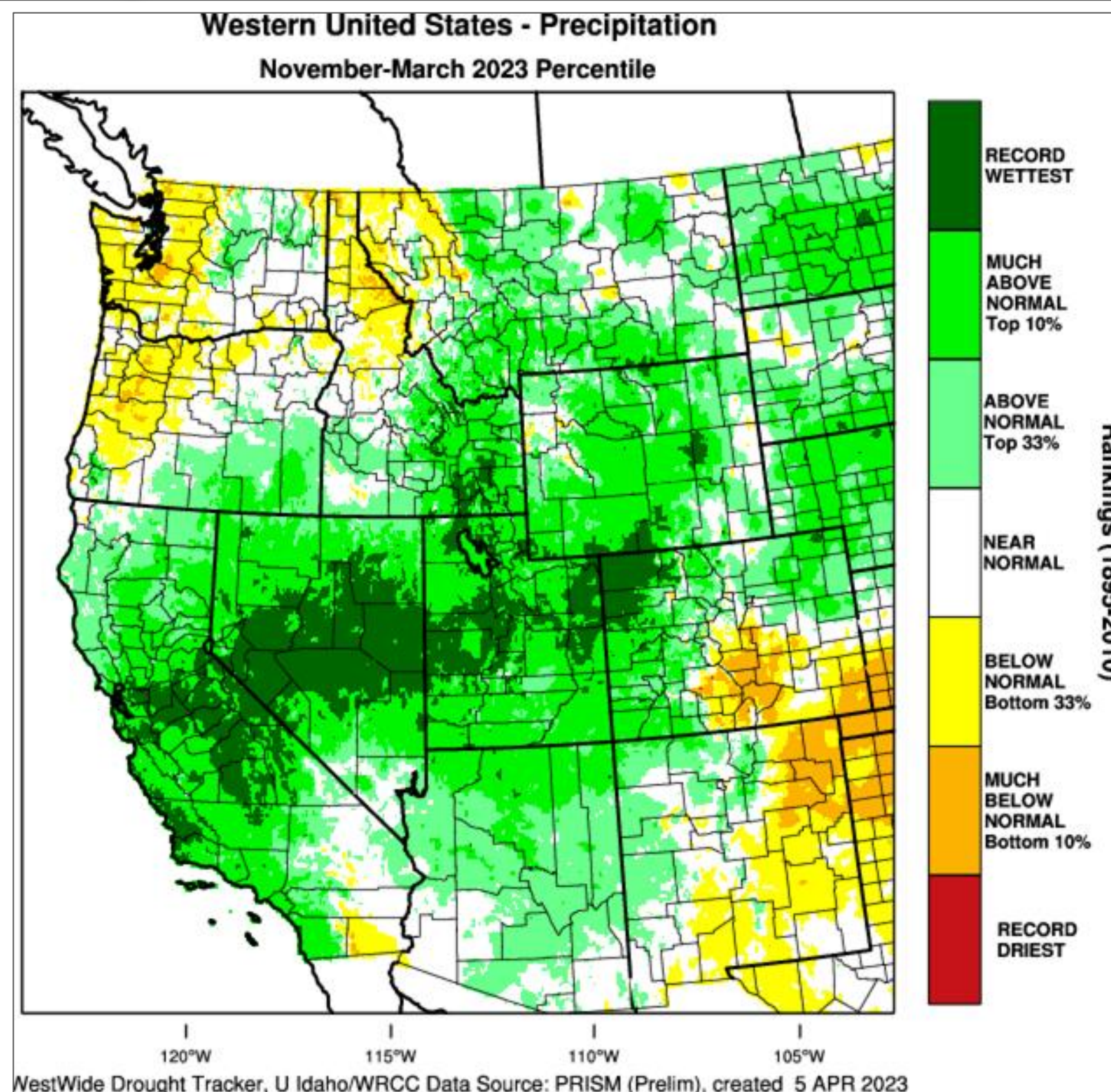


Several strong to extreme atmospheric rivers made landfall into California. These heavy precipitation storms combined with no rain shadow & colder than normal temperatures led to a historic snowpack.



Winter 2022-23 - Wet & Prolonged Cold

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0

Days with high temp of 65°+ at Reno 11/1 - 4/5. First time on record back to 1894!

Normally we have **23** such days!

4.64"

Minden's 24-hour precip ending New Year's morning. Heaviest 1-day precip on record, back to 1906!

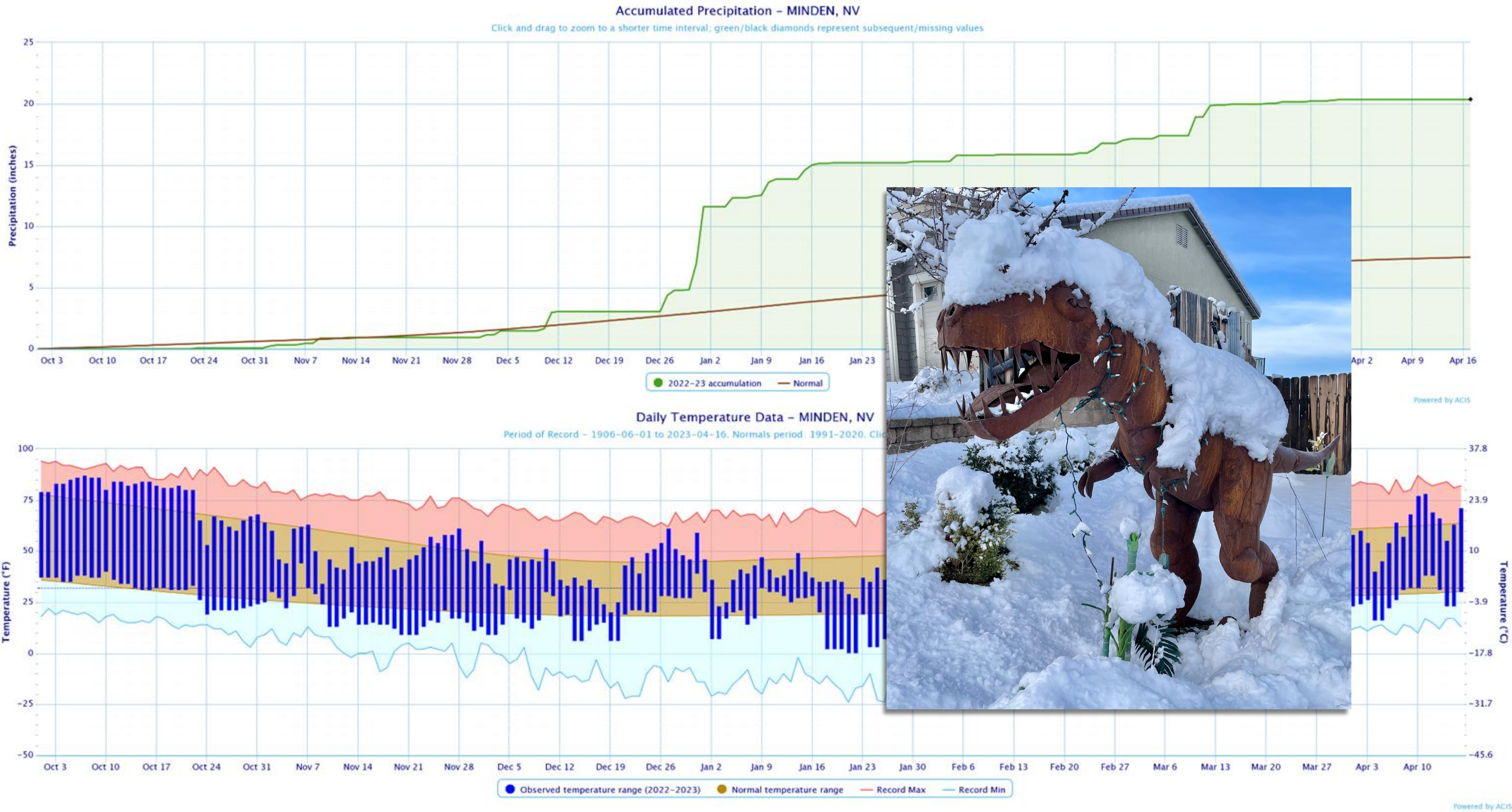
71.2"

Minden's snowfall since October 1st. 2nd only to 1910.



Christmas to New Year's Storms Were Enormous

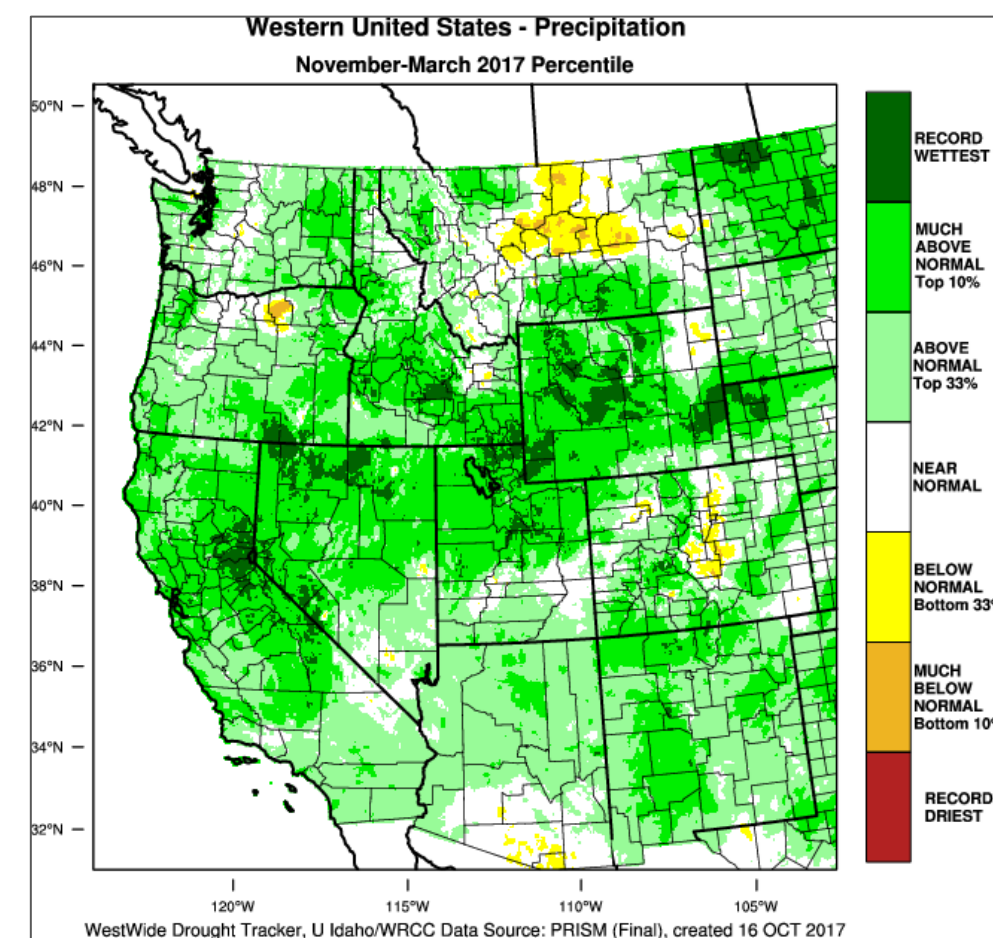
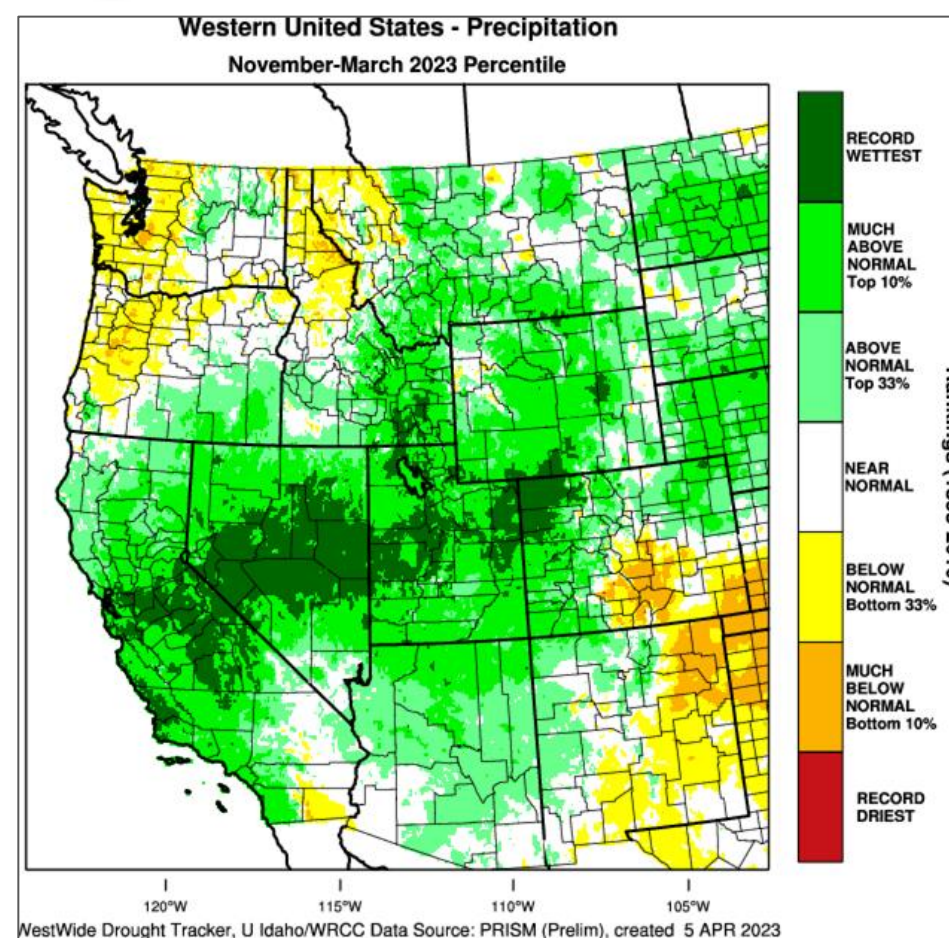
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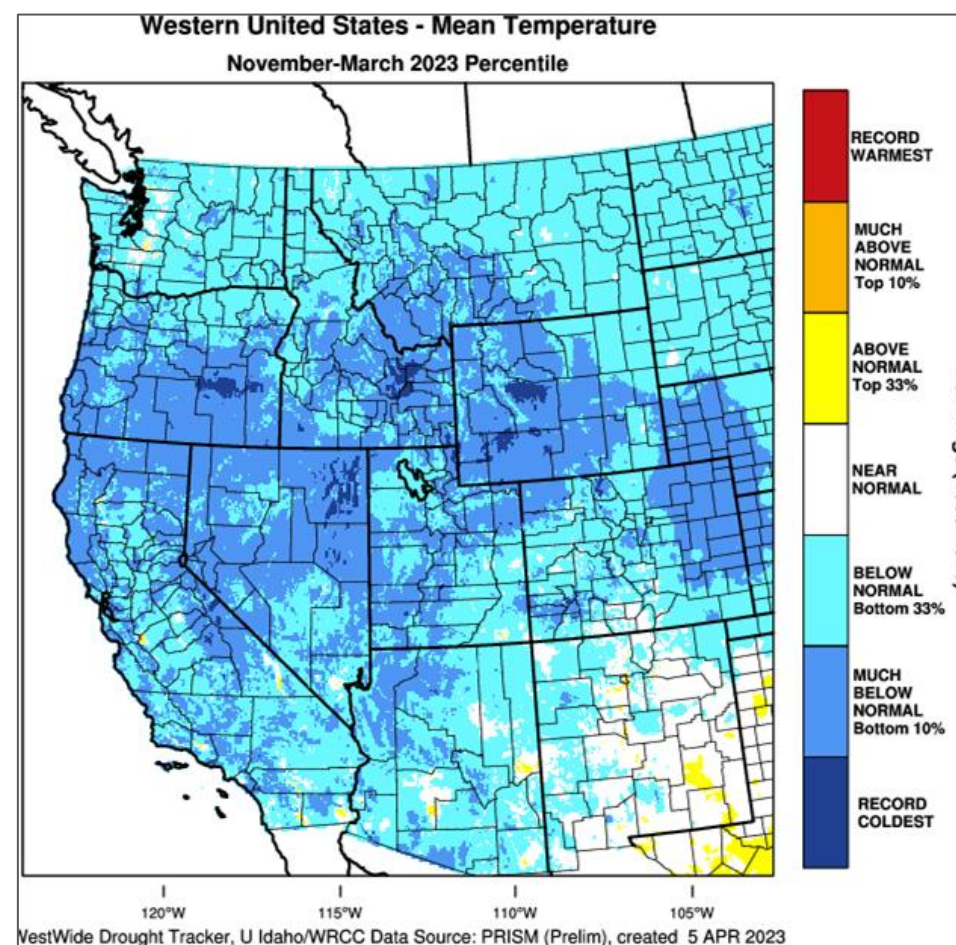


Two Super Wet Years: 2023 vs 2017

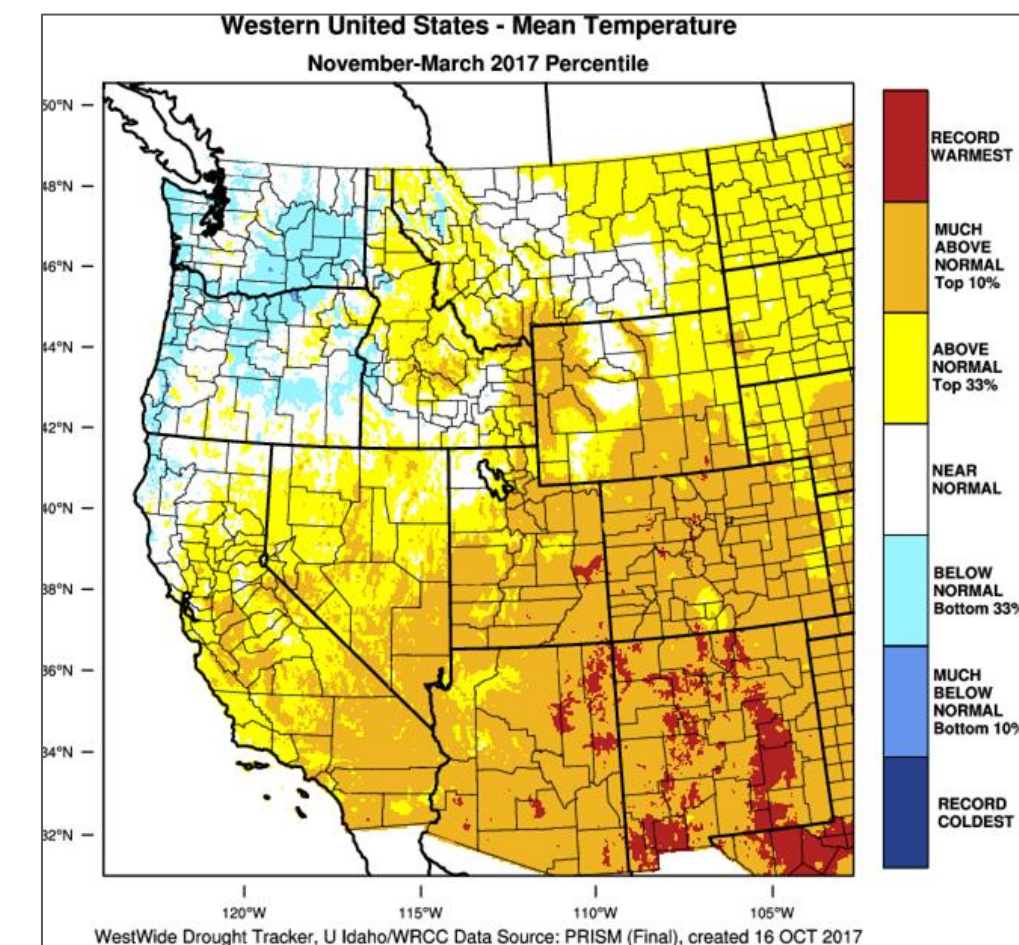
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2023



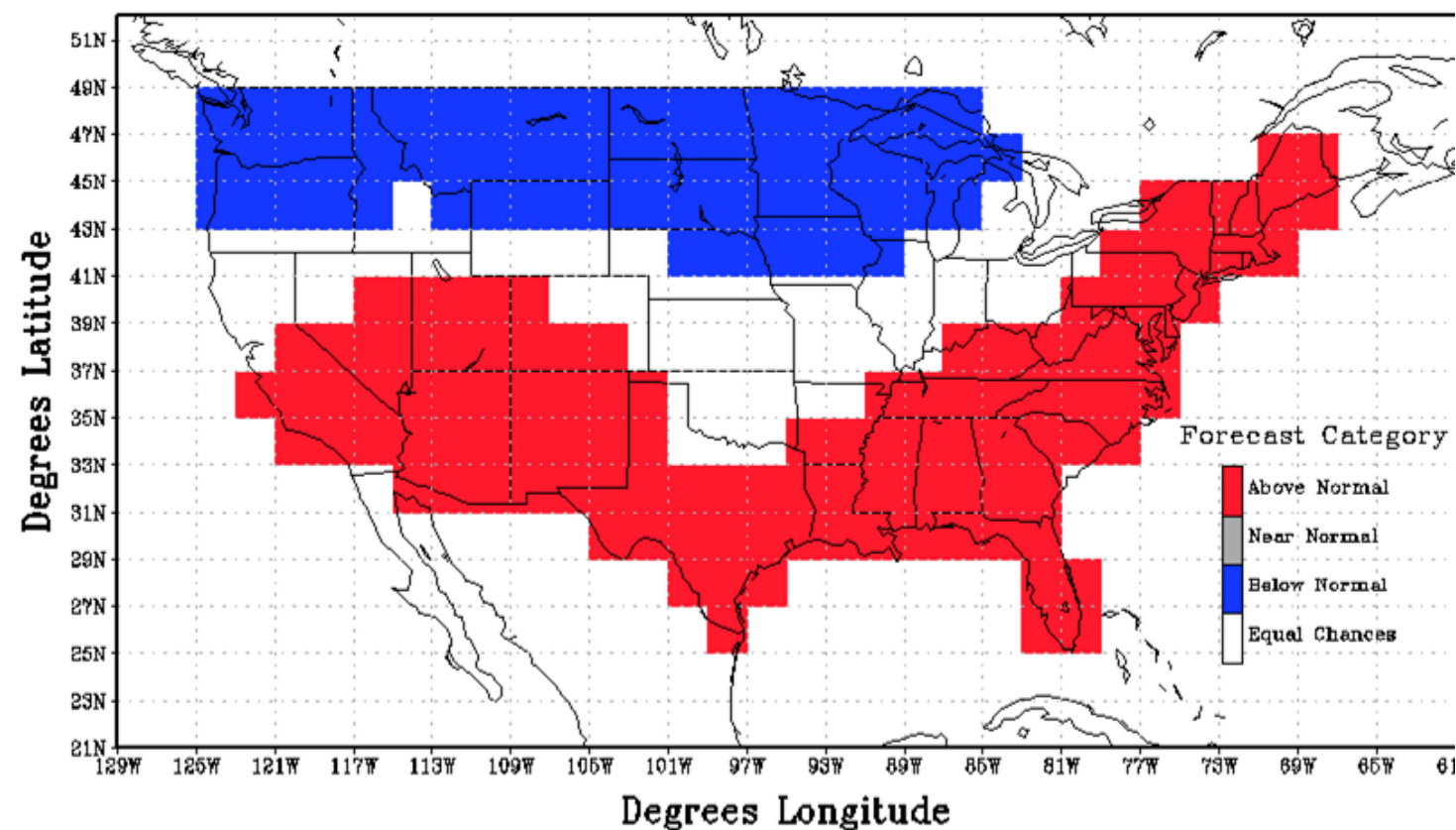
2017



Massive Climate Anomaly - How Did Forecasts Do?

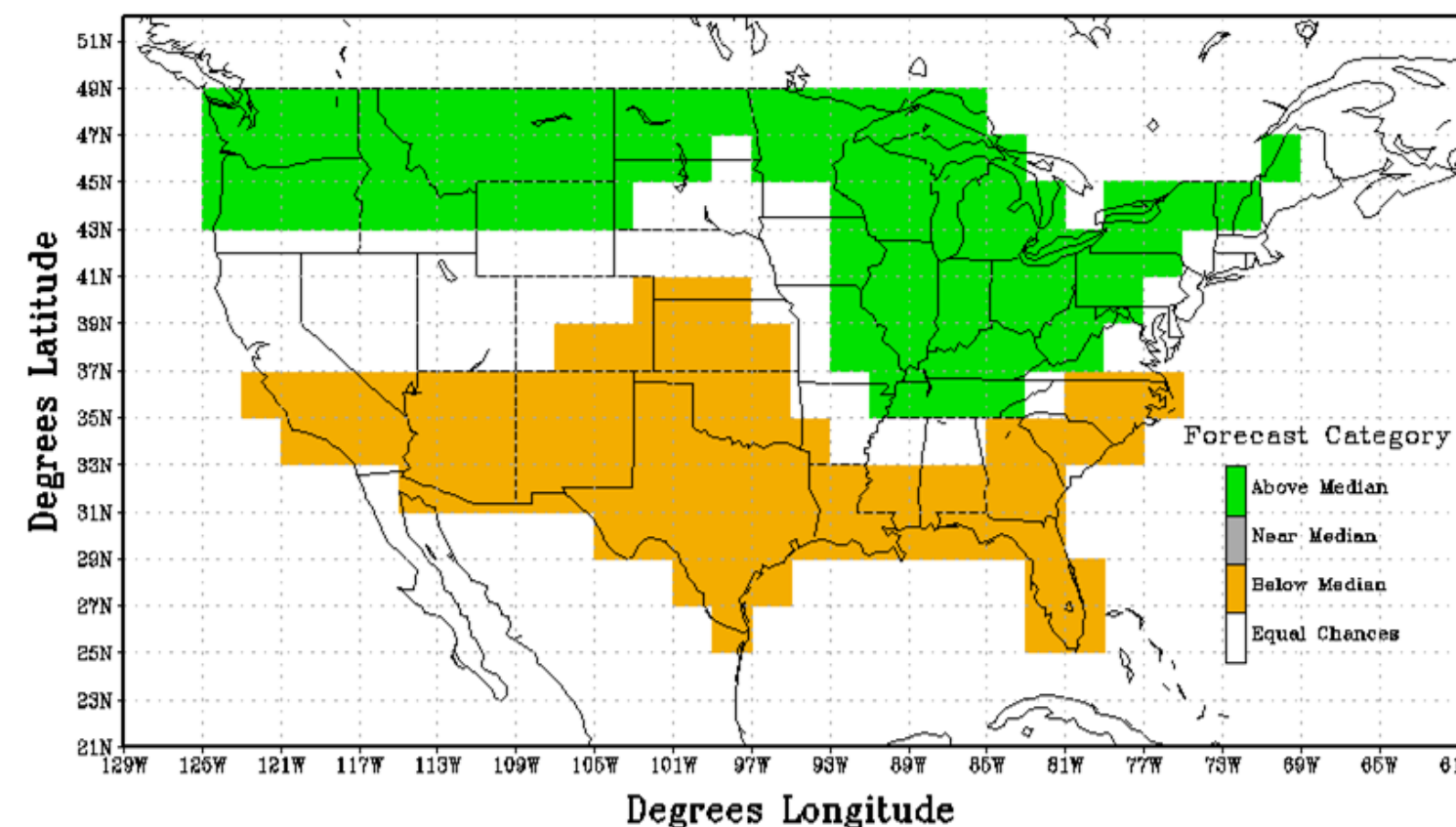
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Categorical Temperature Official Forecast
Issued: Nov 2022 Valid: Dec-Jan-Feb 2022-23

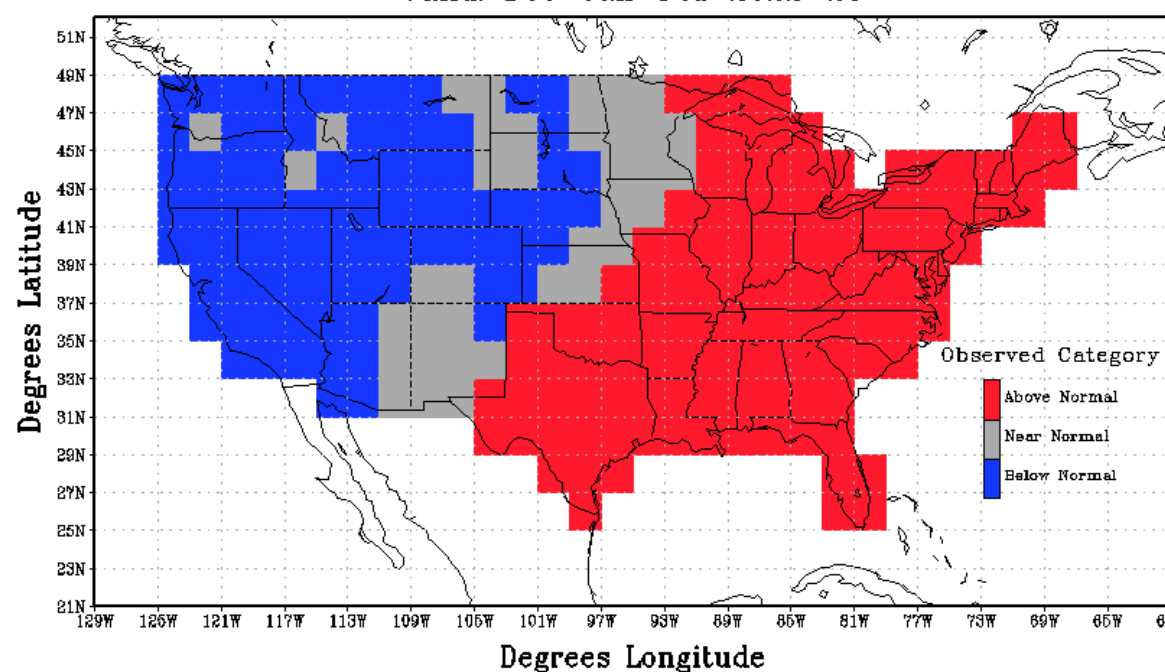


How it
started.

Categorical Precipitation Official Forecast
Issued: Nov 2022 Valid: Dec-Jan-Feb 2022-23

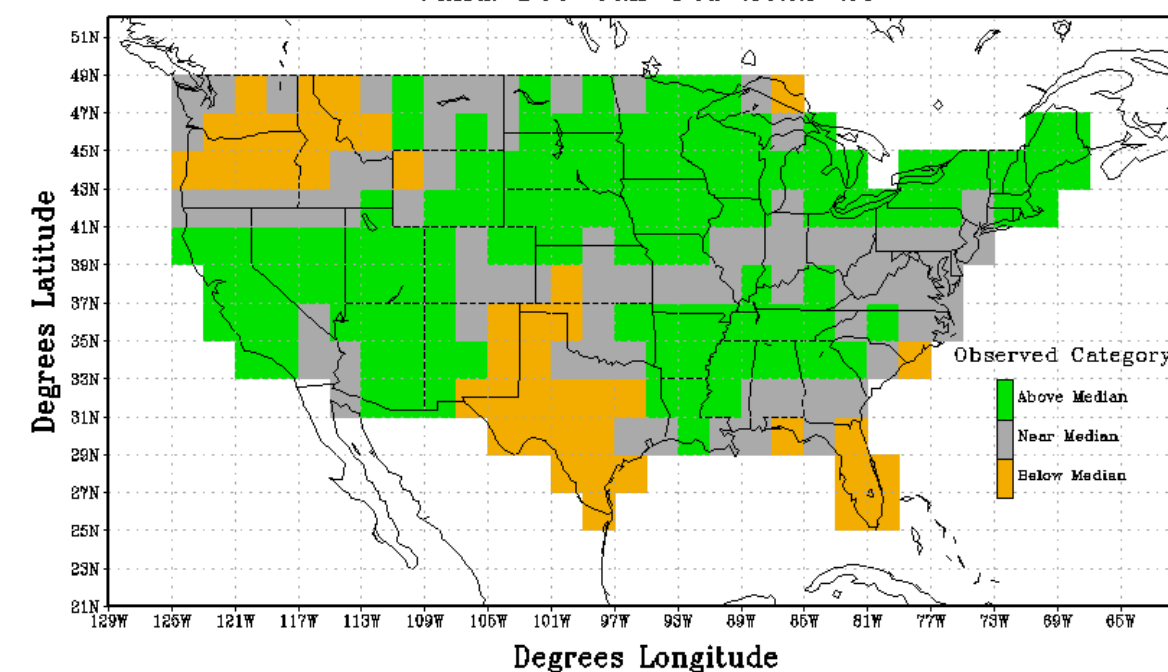


Categorical Temperature Observations
Valid: Dec-Jan-Feb 2022-23



How it's
going.

Categorical Precipitation Observations
Valid: Dec-Jan-Feb 2022-23

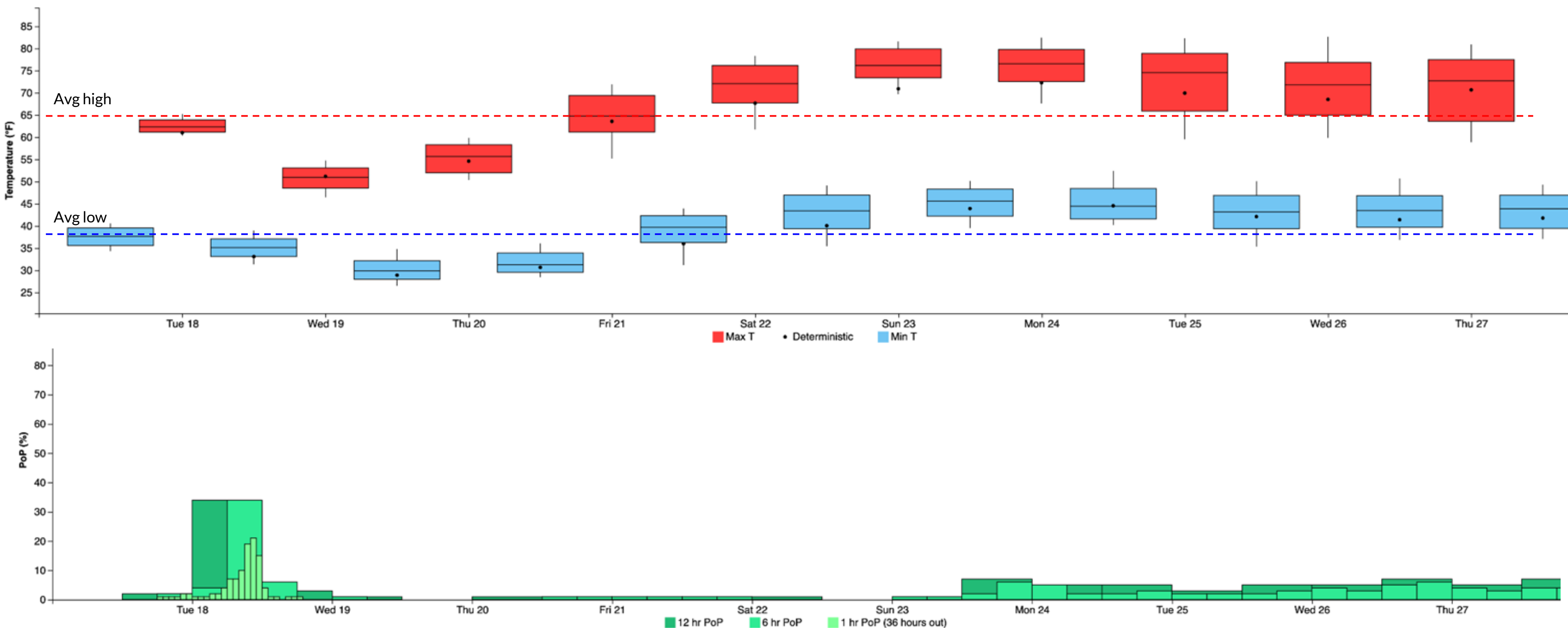


Seasonal forecasts: too good to ignore, but not good enough to use.



Next 7-10 Days: Mostly Dry With Up & Down Temps

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Forecast guidance for Reno-Carson City area, as of 4/17 AM.

Snowmelt continues to be rather gradual with cool/warm cycles and no big heat or rain.



Week Two: Typical Late April Weather

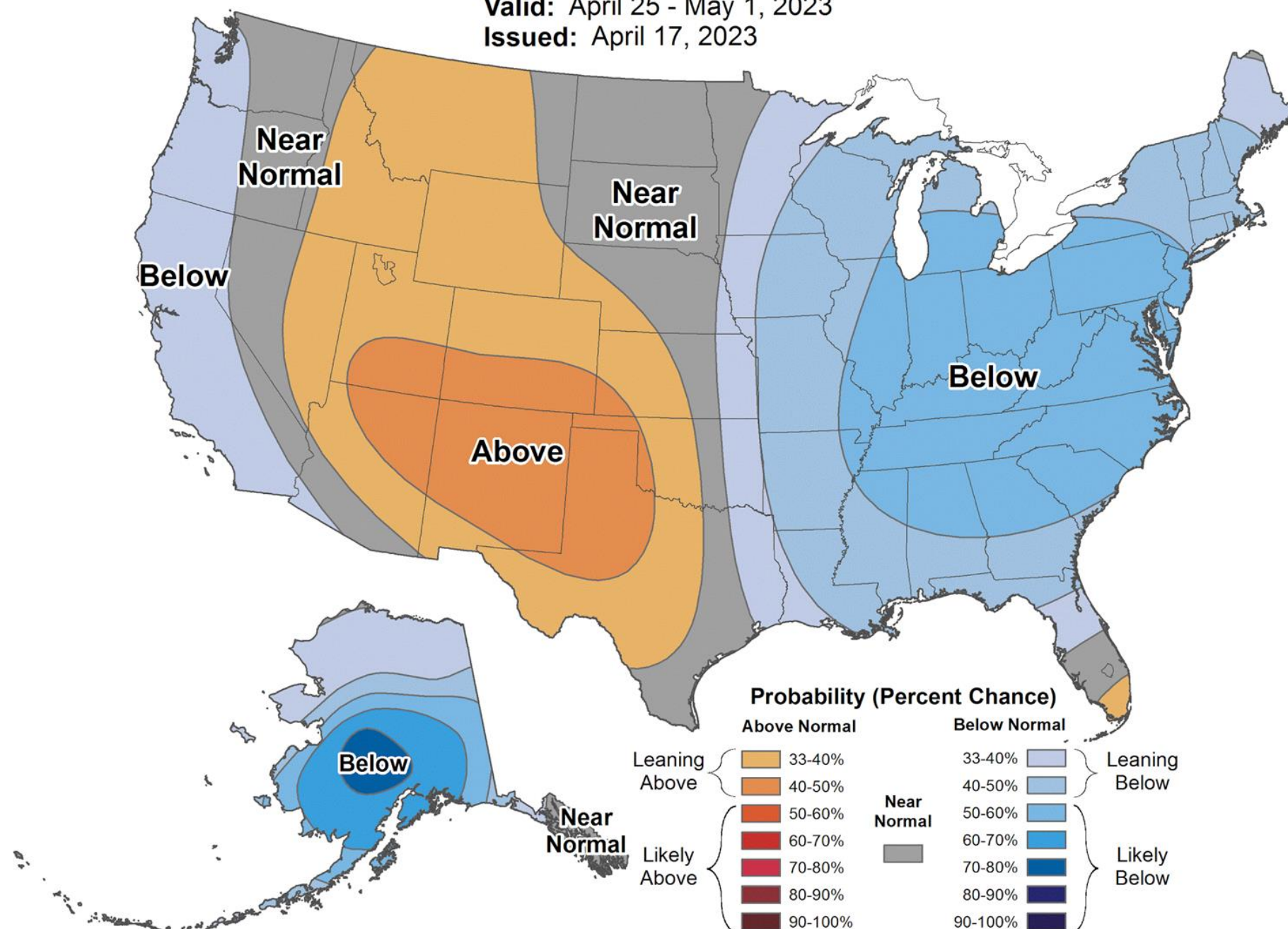
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8-14 Day Temperature Outlook



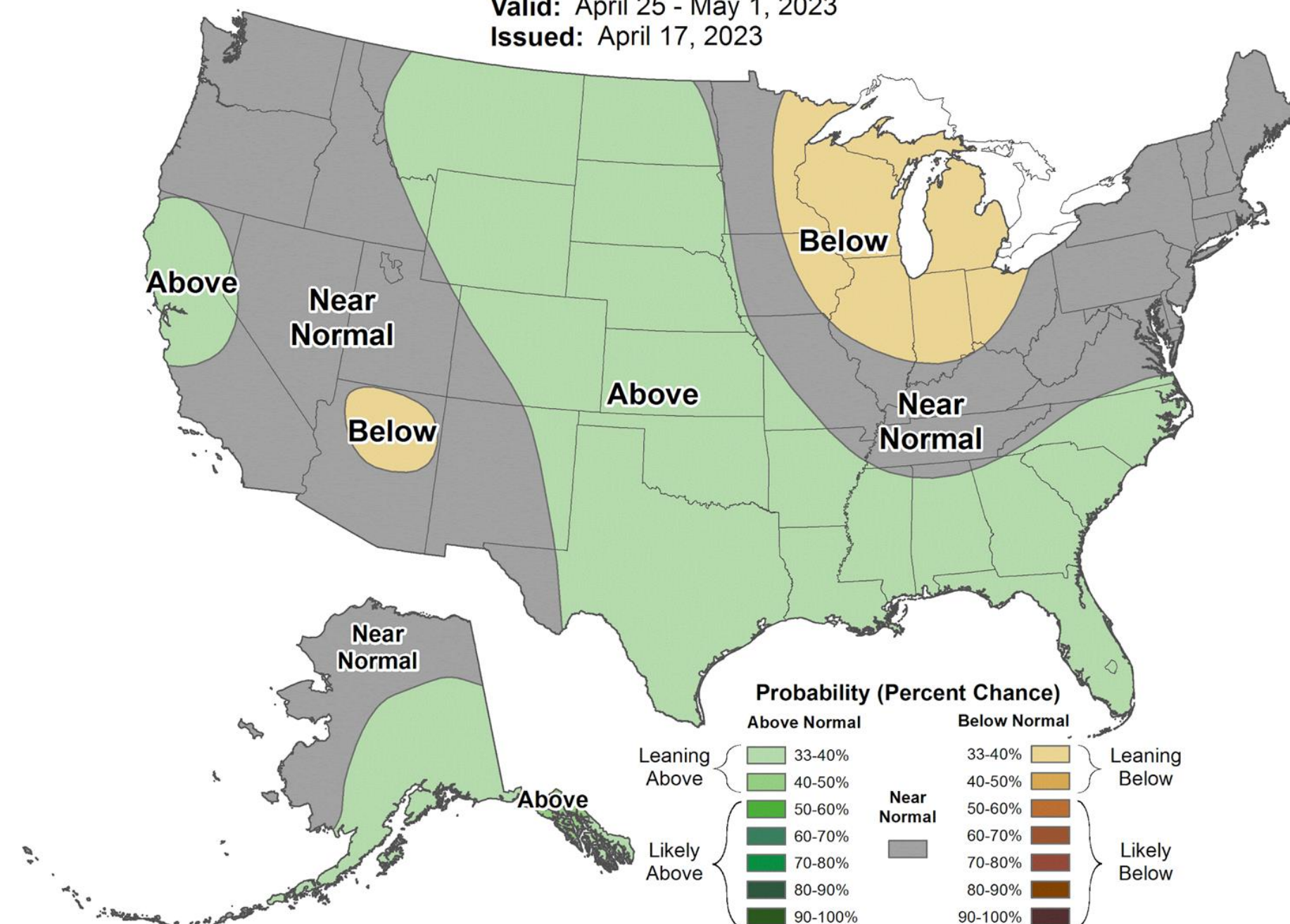
Valid: April 25 - May 1, 2023
Issued: April 17, 2023



8-14 Day Precipitation Outlook



Valid: April 25 - May 1, 2023
Issued: April 17, 2023



Week two outlook showing **no screaming signals** for anomalous heat/cold nor wet/dry.

Likely continues trend of a relatively gradual melt of snowpack.

Next 1-2 Weeks: Atmospheric Rivers?

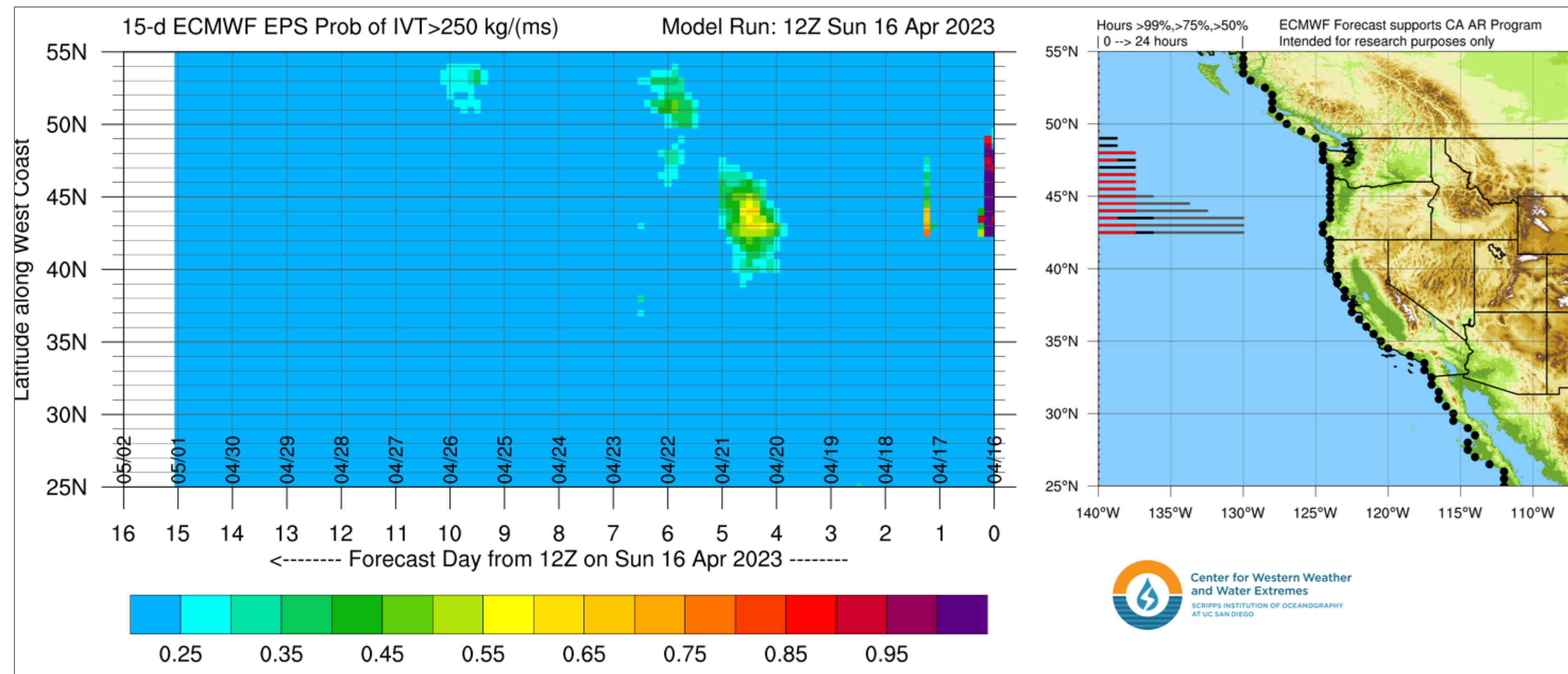


Chart shows probability of atmospheric river making landfall at various latitudes and out to 16 days.

Chart is mostly quiet - pretty typical as we head later into April and May.

Wet Pacific storms remaining north of our region.



Balance of April: Week 3-4 Outlook

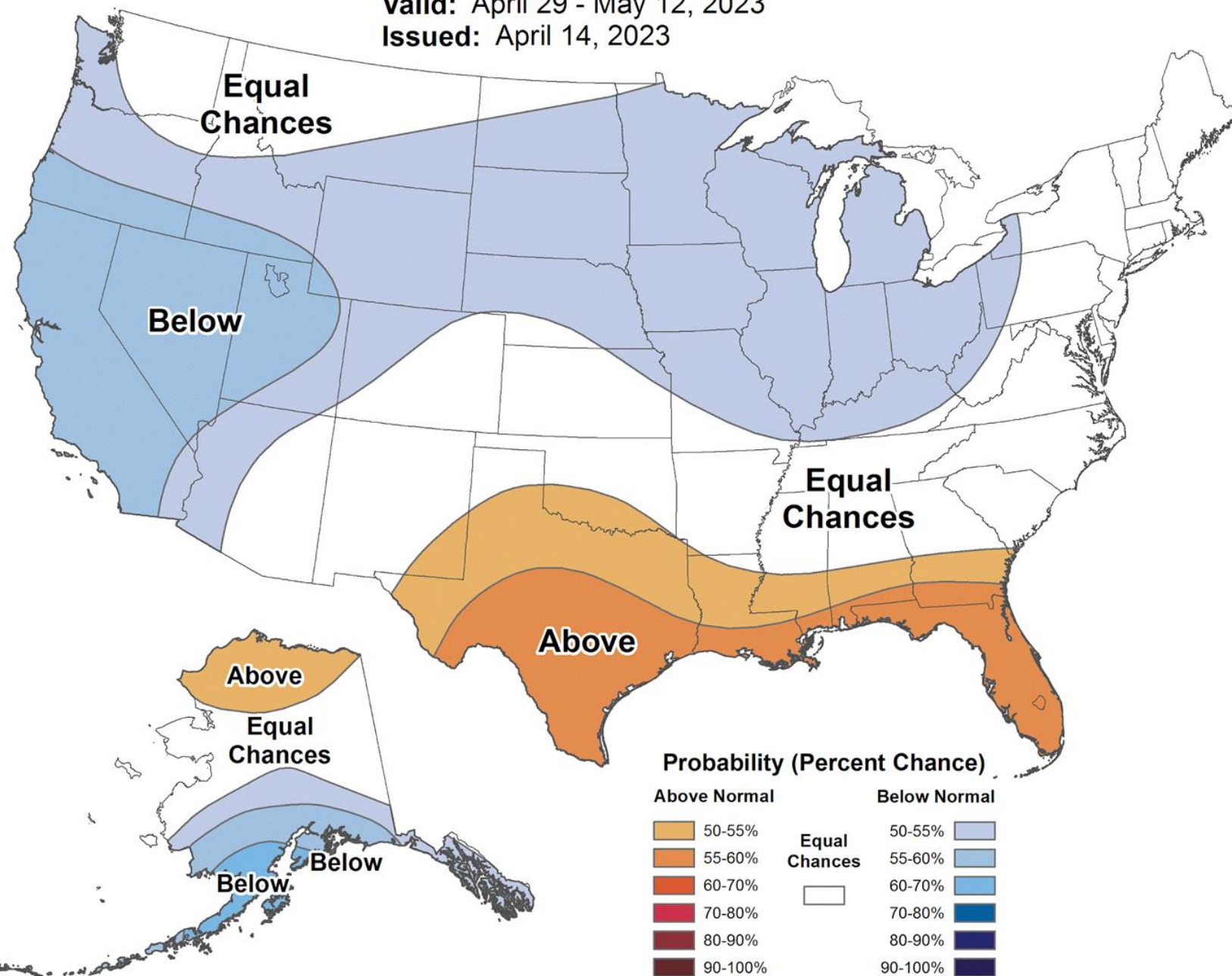
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Weeks 3-4 Temperature Outlook



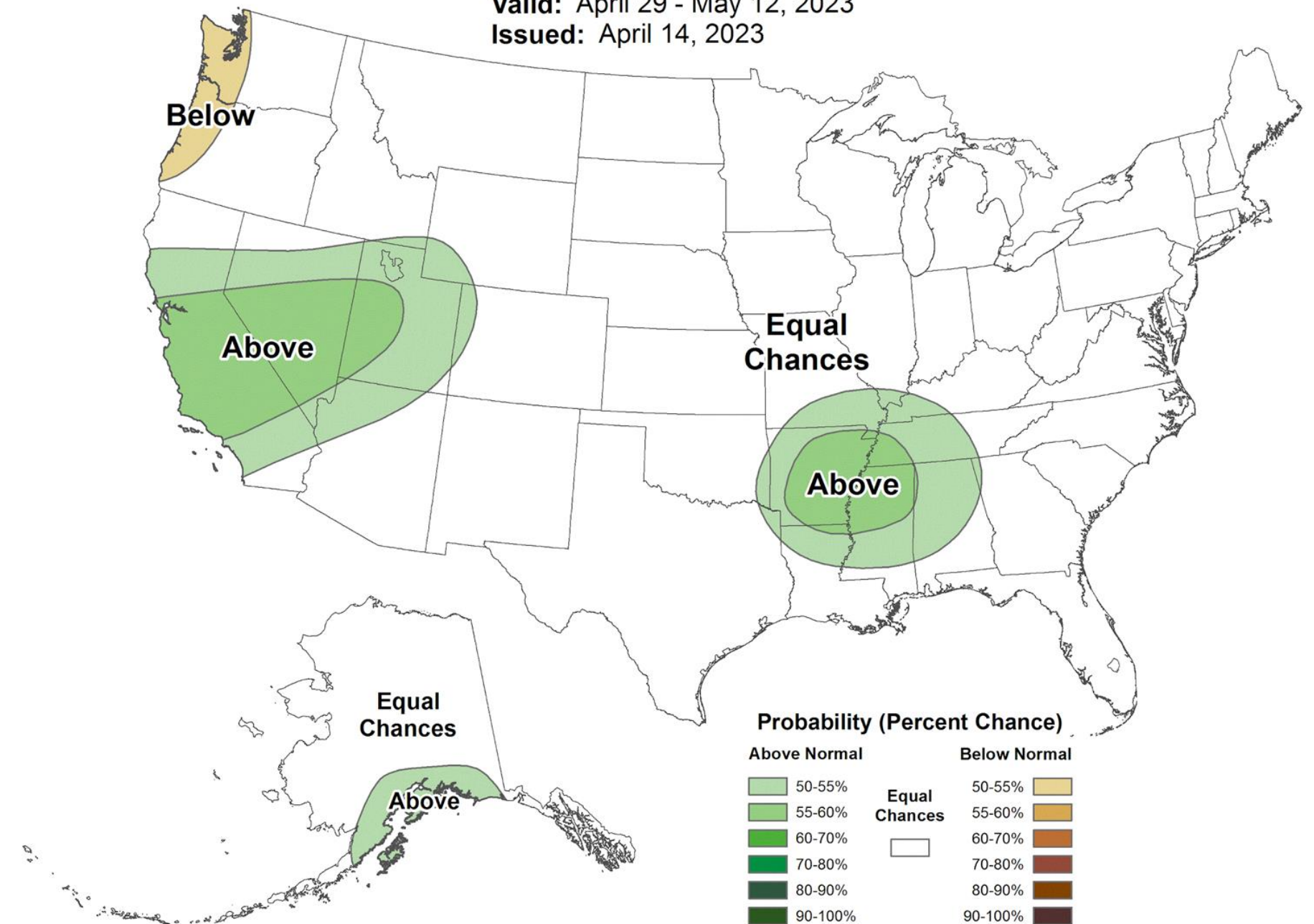
Valid: April 29 - May 12, 2023
Issued: April 14, 2023



Weeks 3-4 Precipitation Outlook



Valid: April 29 - May 12, 2023
Issued: April 14, 2023



Storm door remains at least slightly open into early May.

Note: averages this time of year are low, so doesn't take much to be "above normal"

Leaning of near to below normal temps = snowpack melt remains gradual. **Is that good or not?**



Peak Melt Season: May-June-July

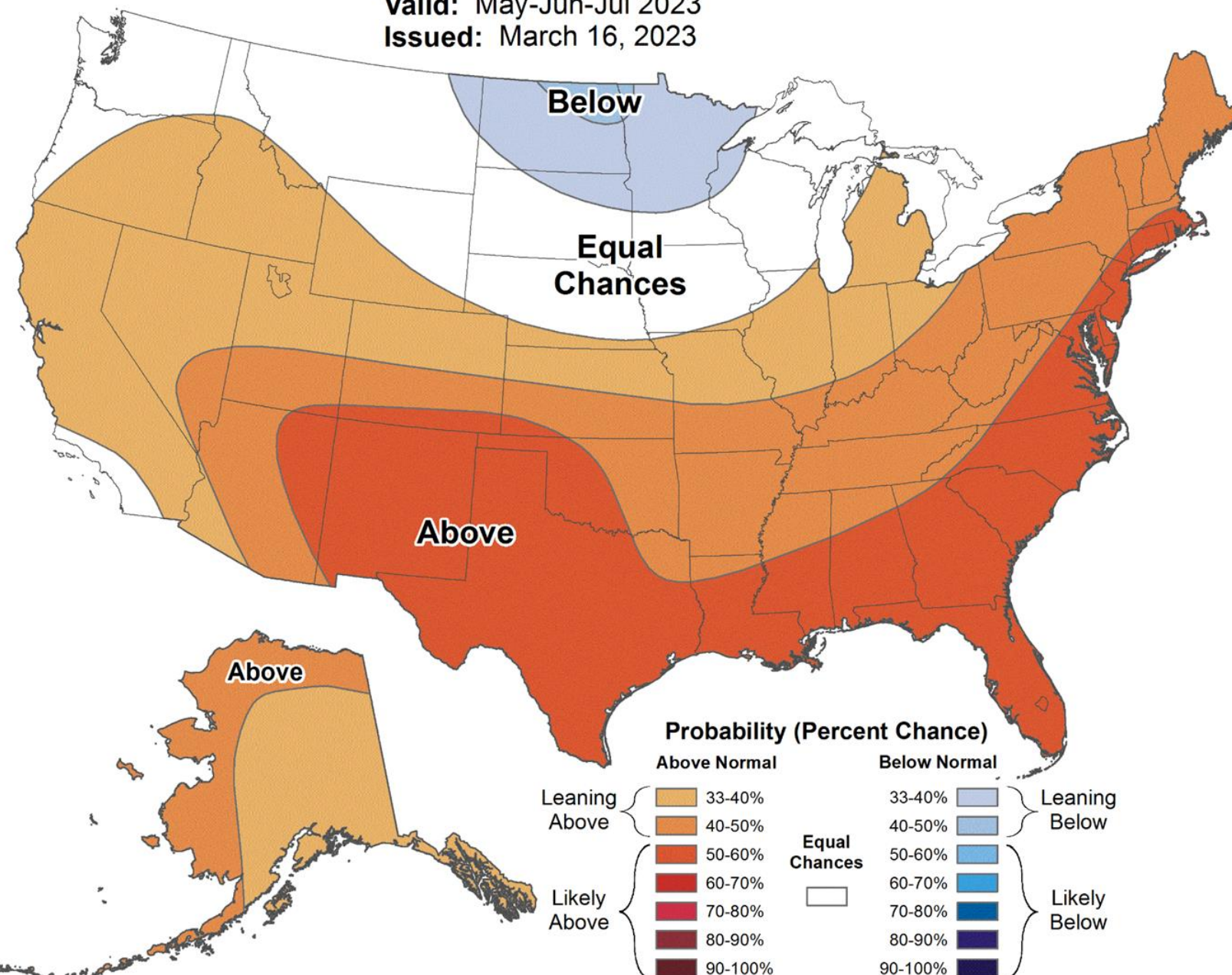
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Seasonal Temperature Outlook



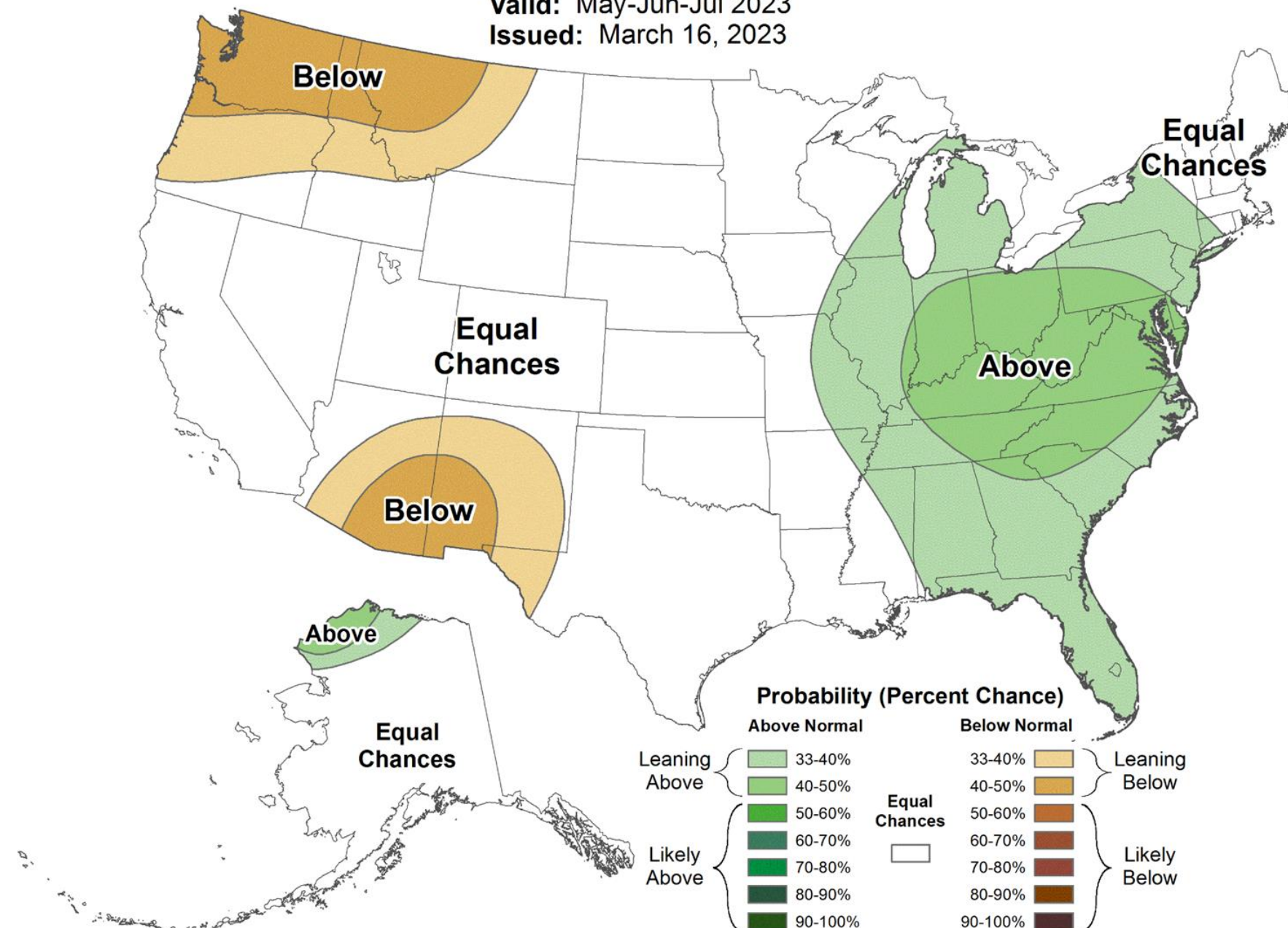
Valid: May-Jun-Jul 2023
Issued: March 16, 2023



Seasonal Precipitation Outlook



Valid: May-Jun-Jul 2023
Issued: March 16, 2023



Precip: No favored outcome. Some signs the monsoon may be less active than last year.

Temps: Leaning above normal but not a high confidence scenario - "cooler winter pattern" may linger.

Good news for snowmelt as that keeps the door open to a more gradual melt scenario.

U.S. Drought Monitor

April '23

100%

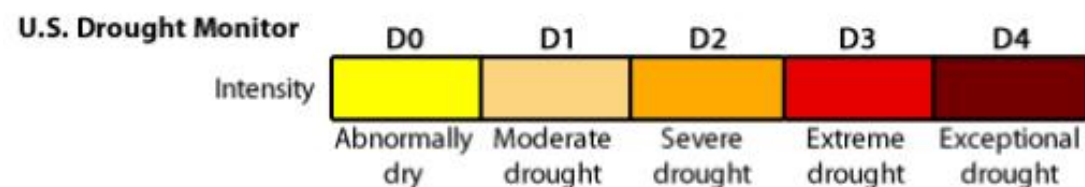
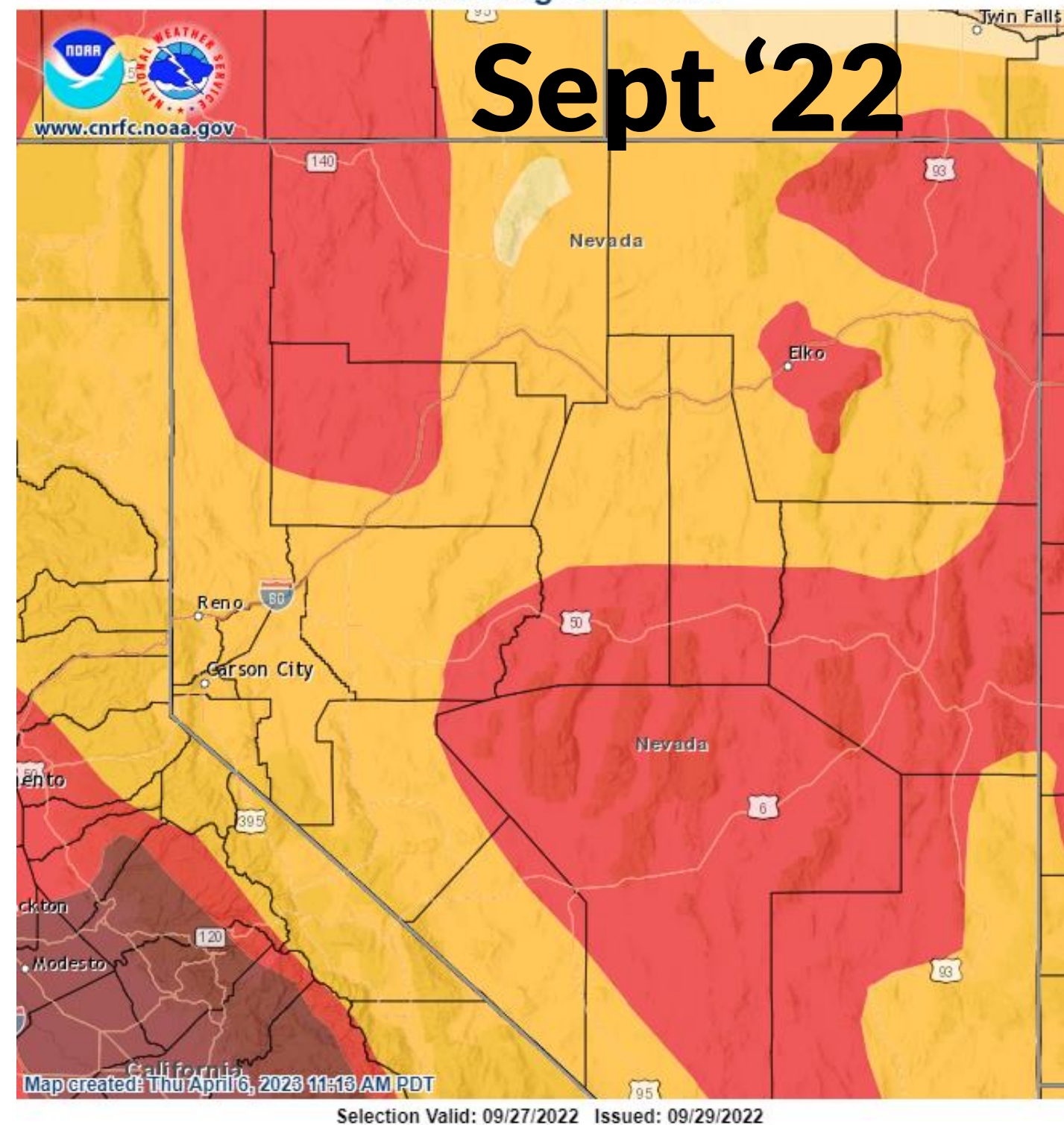
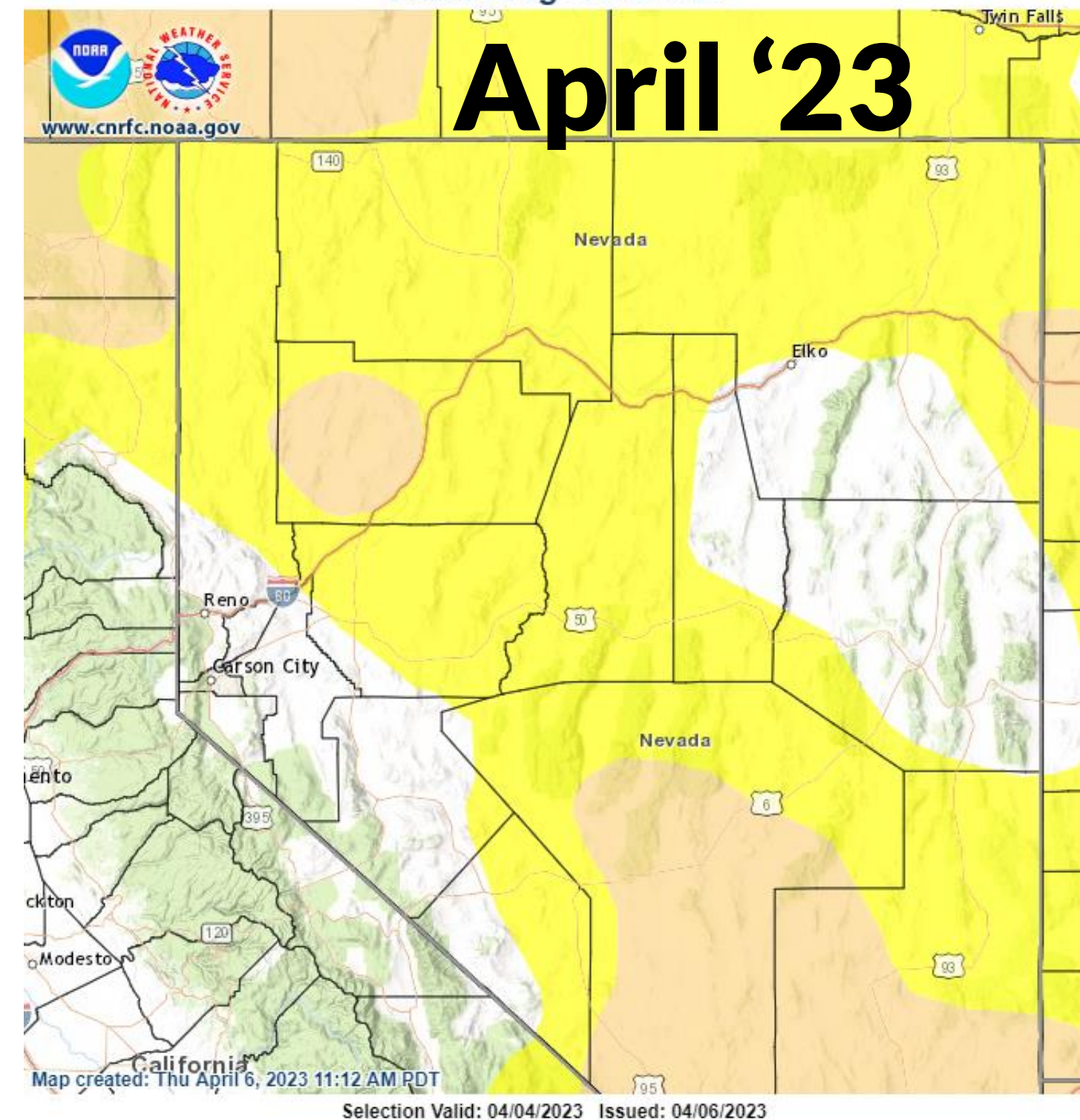
Portion of the Great Basin under D1+ drought status at start of this water year.

25%

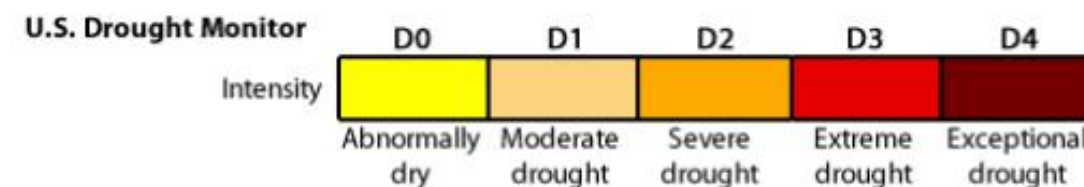
Portion of the Great Basin under D1+ drought status right now.

U.S. Drought Monitor

Sept '22



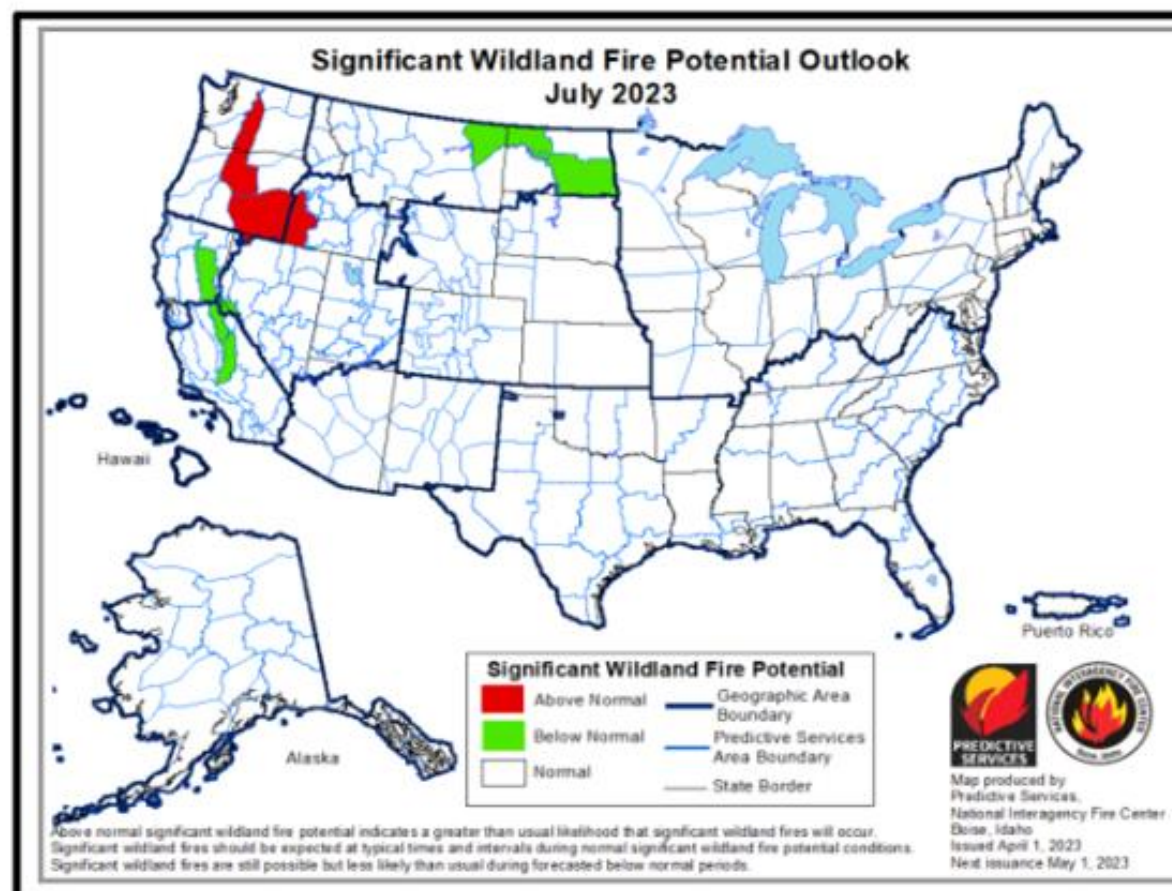
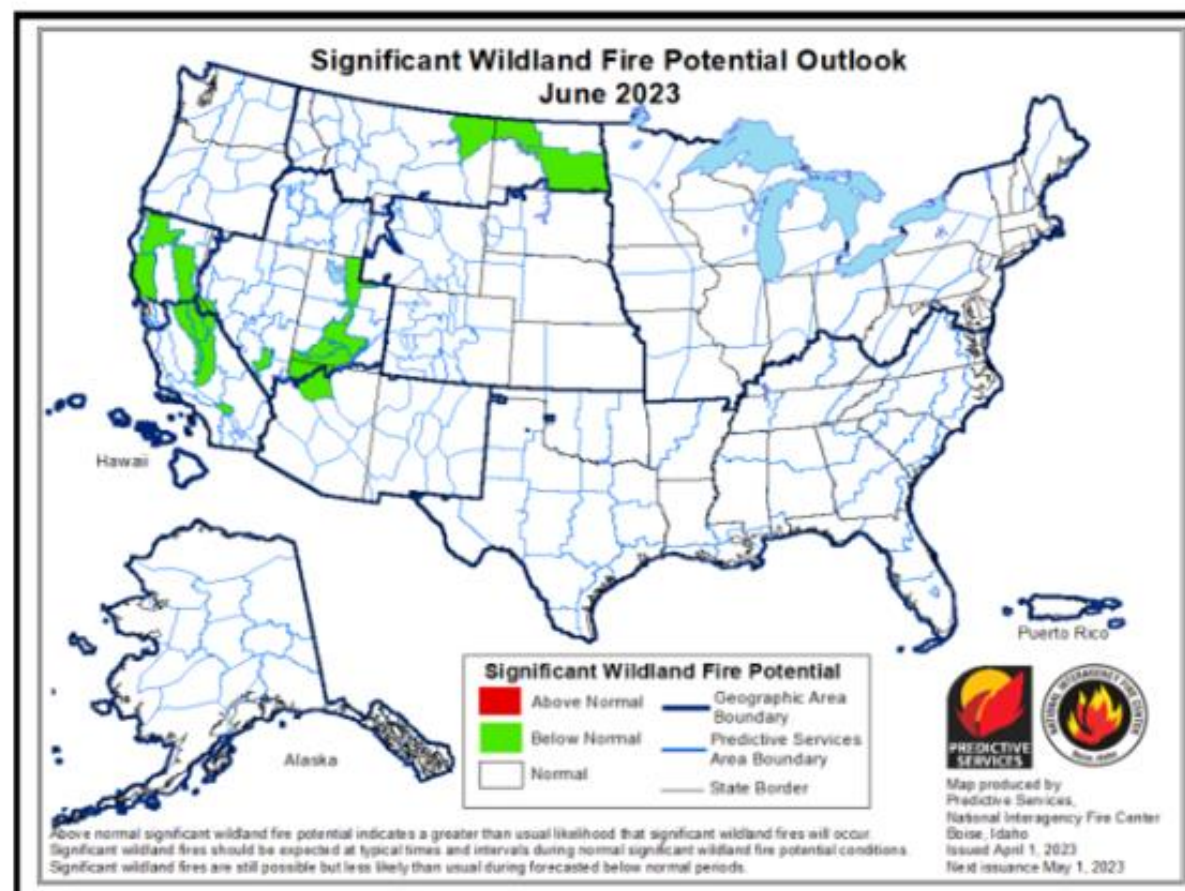
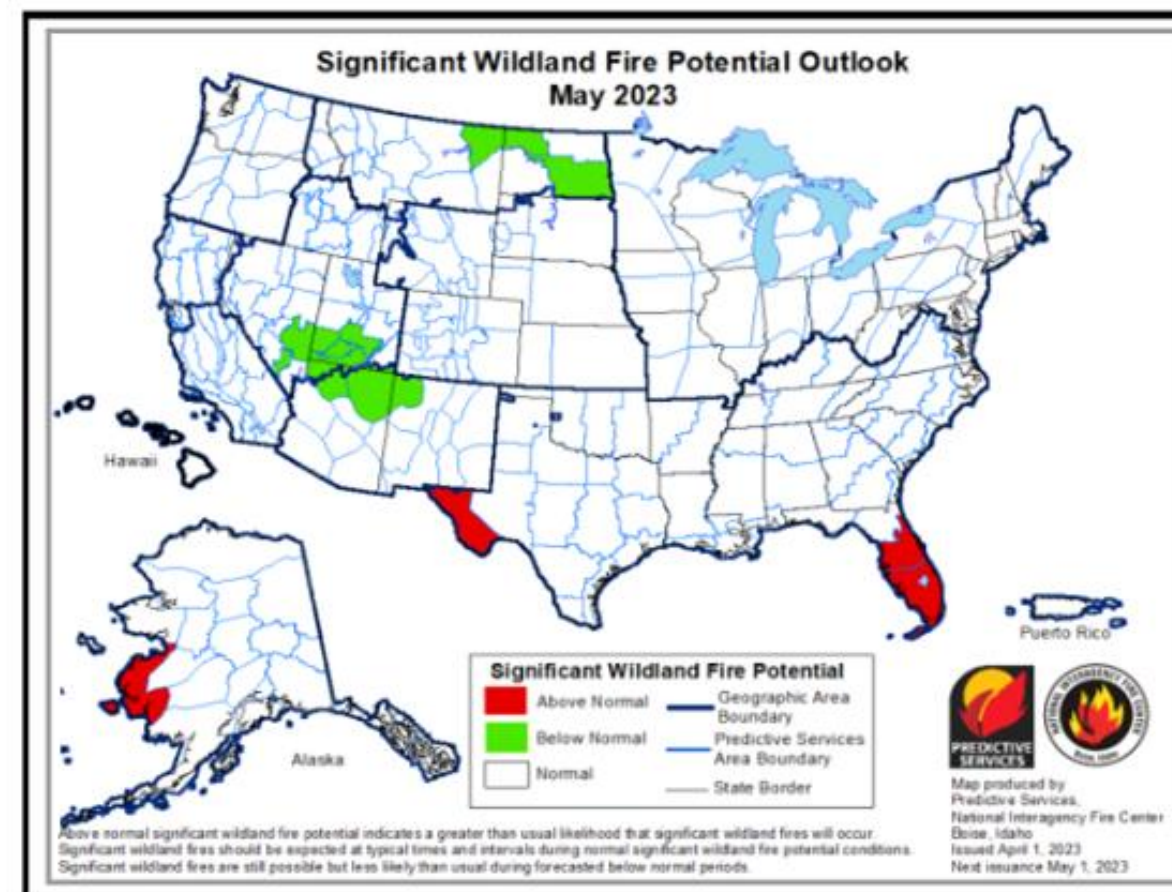
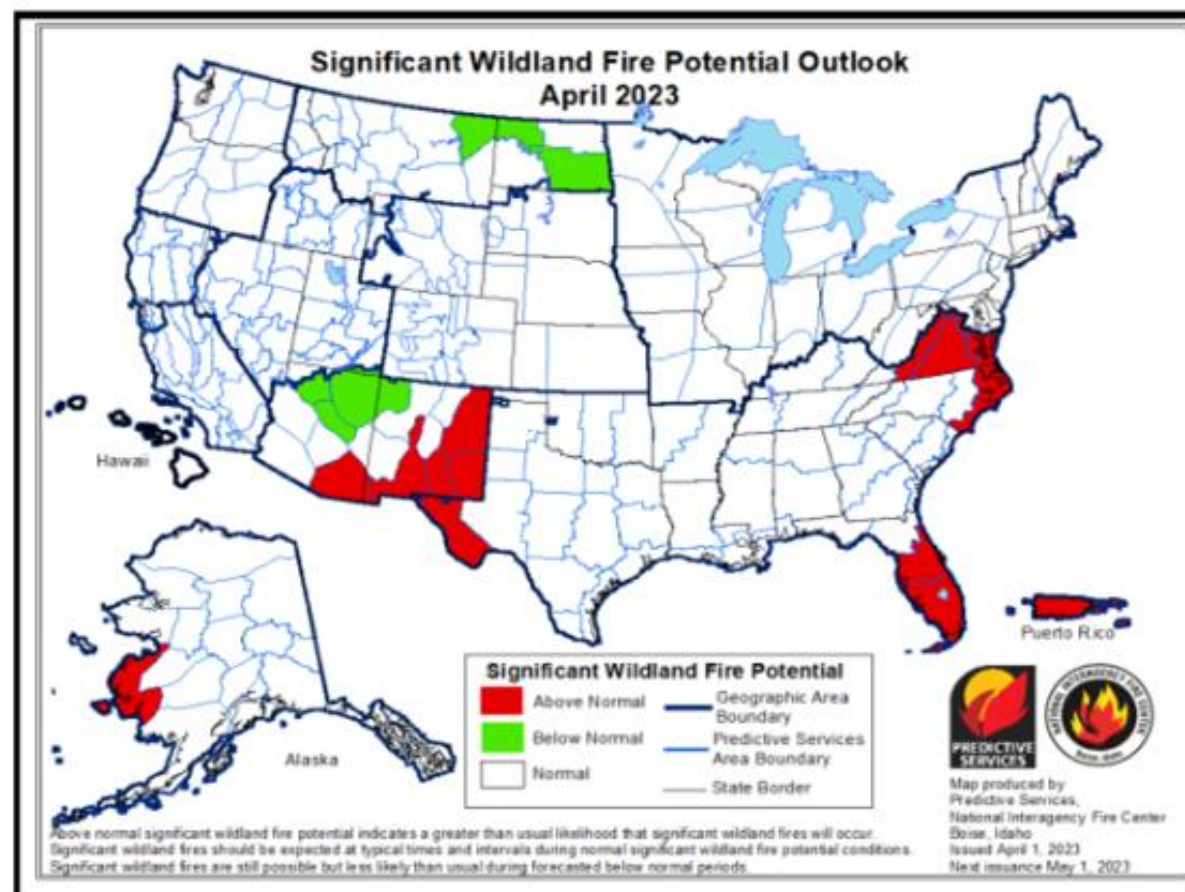
The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC-UNL.



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Official Predictive Services Outlook through July

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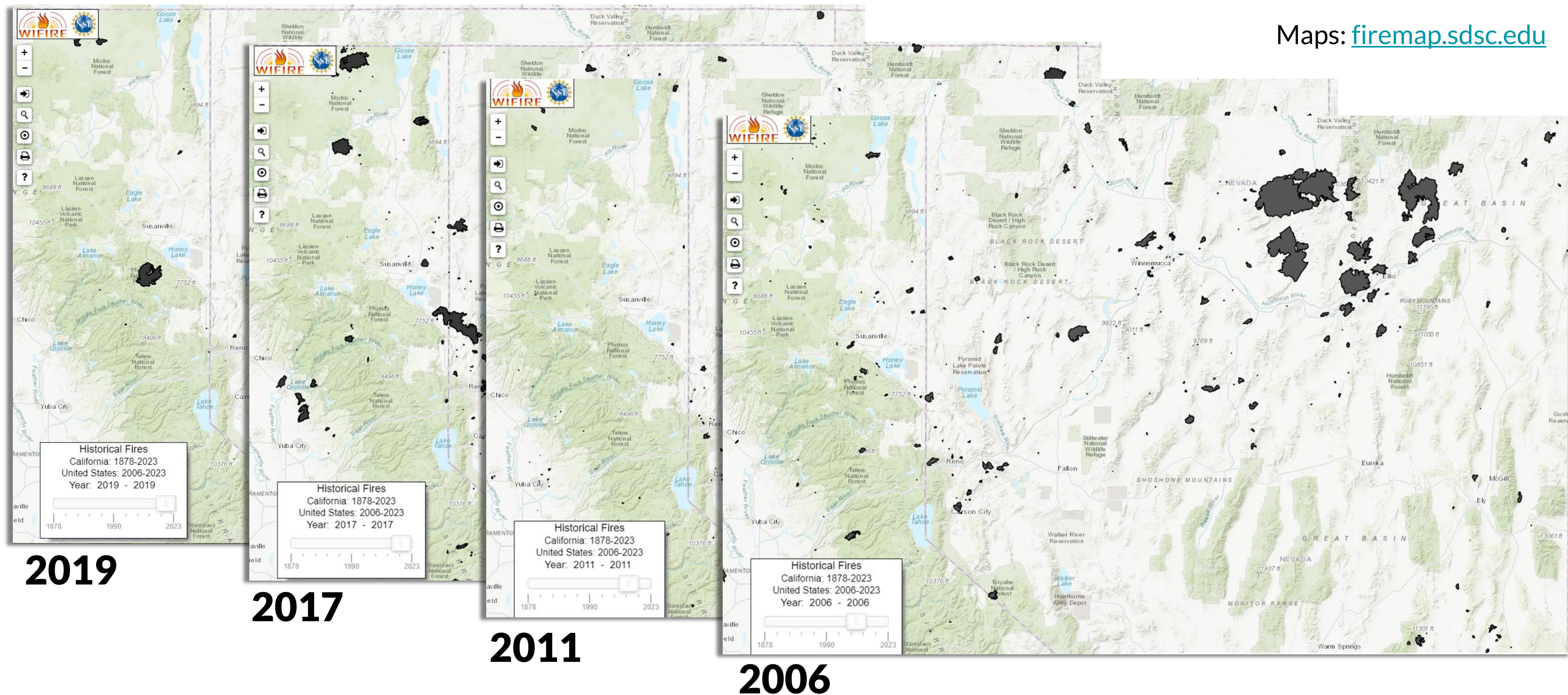


- First time in many years that we have green “below normal” in the Sierra!!!
- Delayed start in mountains for sure, but TBD on activity late summer & autumn.
- Note that Great Basin is “near normal”. If we end up with a hotter June-July, a quick ramp up in fire activity is possible.
- Oregon-Washington is probably where things will take off the soonest this summer: less winter precip, continued drought.

What Have Other Recent Big Snow Years Done?

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Maps: firemap.sdsc.edu



Mountain fire activity normally limited and/or delayed following big snow winters. Drought tree kill adds a huge wildcard.
Great Basin areas can be more active due to increased fine fuels & grasses, but not a guarantee.

- **Streams will be high, cold, and fast well into summer. Some campgrounds near streams could be affected.**
- **Increased numbers of rescue incidents.**
- **Lakes and reservoirs will be a lot fuller than in recent years.**
- **High elevation Sierra passes will open much later than normal.**
- **Plan on snow sections for early summer mountain trails.**
- **Maybe consider leaning toward mid to late summer for big backcountry adventures. At least there will be plenty of water!**

Tahoe Rim Trail near Relay Peak - August 2, 2019





That's a Wrap!

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