



Pre-Winter 2021 - Here We Go Again...

Weather Forecast Office
Reno, NV
Monday, November 1



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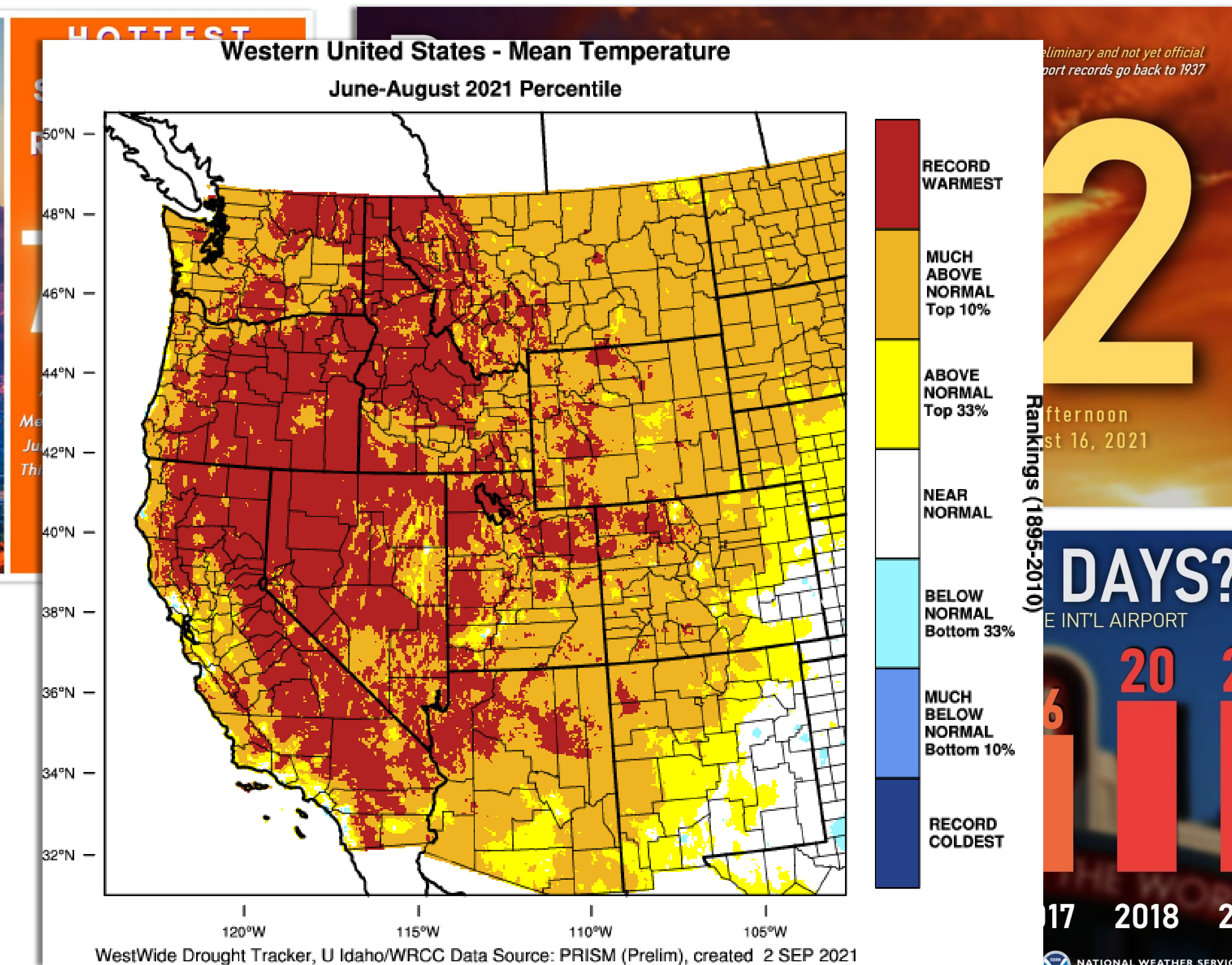
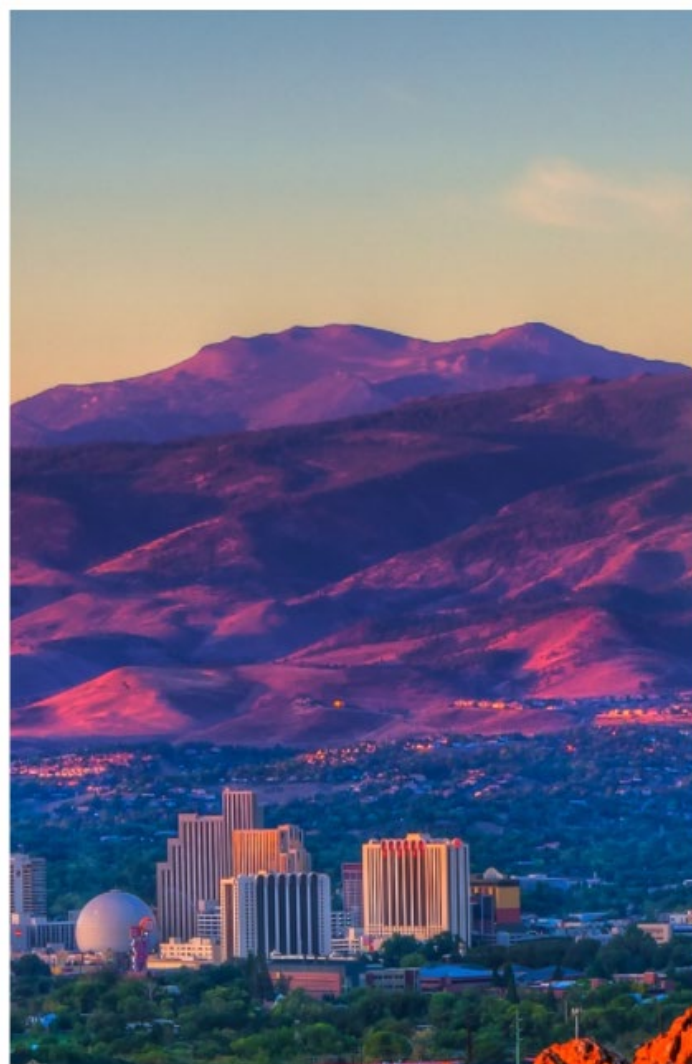
Drought is firmly entrenched.

Everything was on fire or covered in smoke.

Summer was way too hot and dry.

So, will Winter 2021-22 save us all??

Summer 2021: It Was Certainly Hot



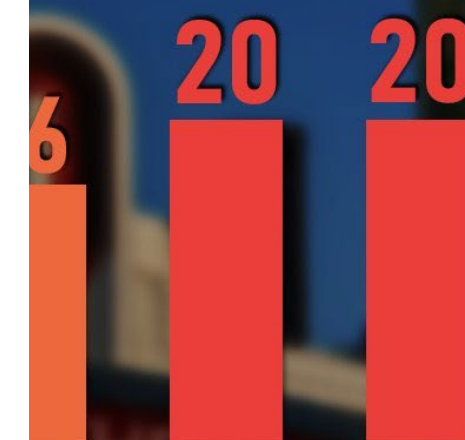
*eliminary and not yet official
port records go back to 1937*

2

afternoon
st 16, 2021

DAYS?

E INT'L AIRPORT

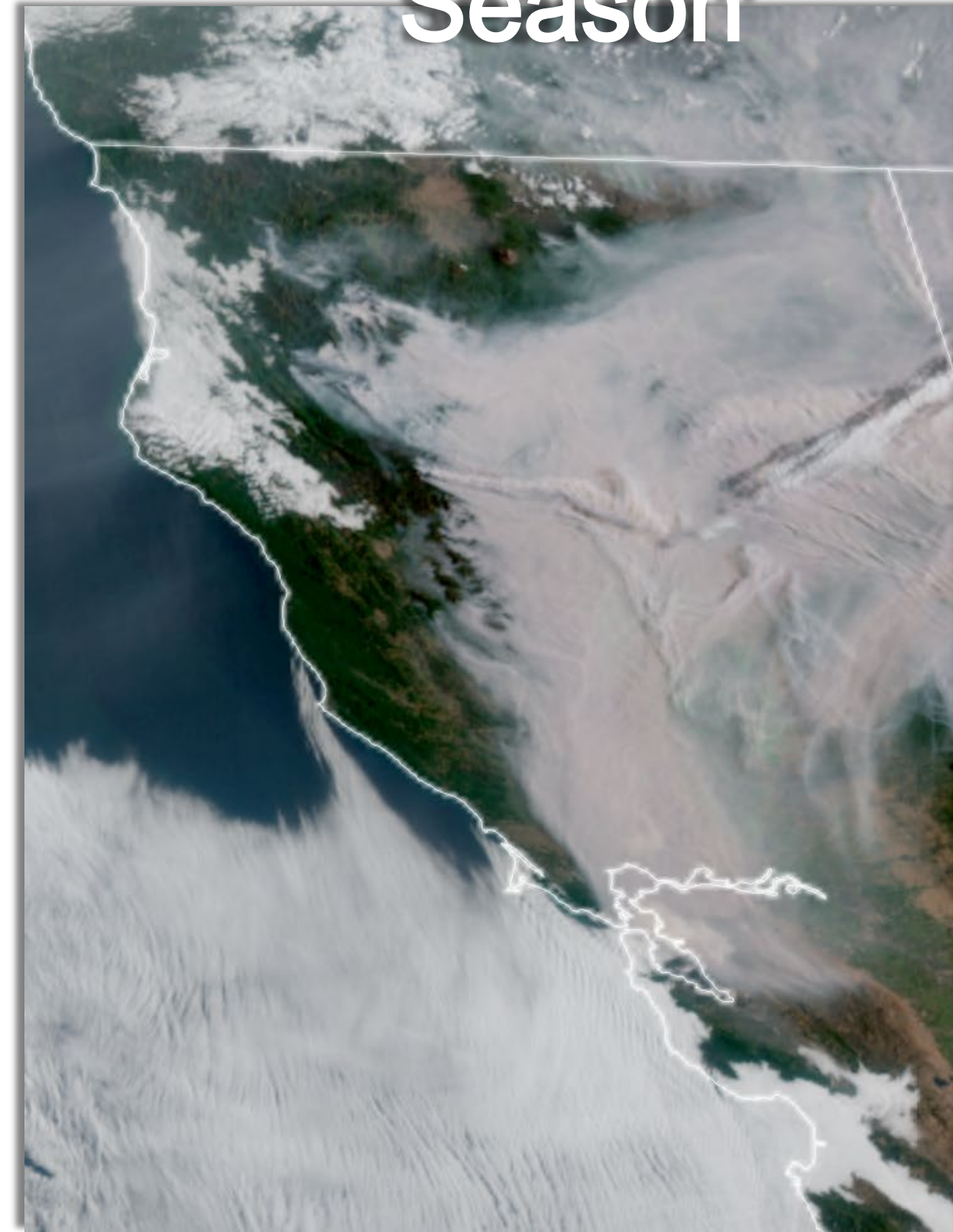


2017 2018 2021



Summer 2021: Also Known as “Smoke Season”

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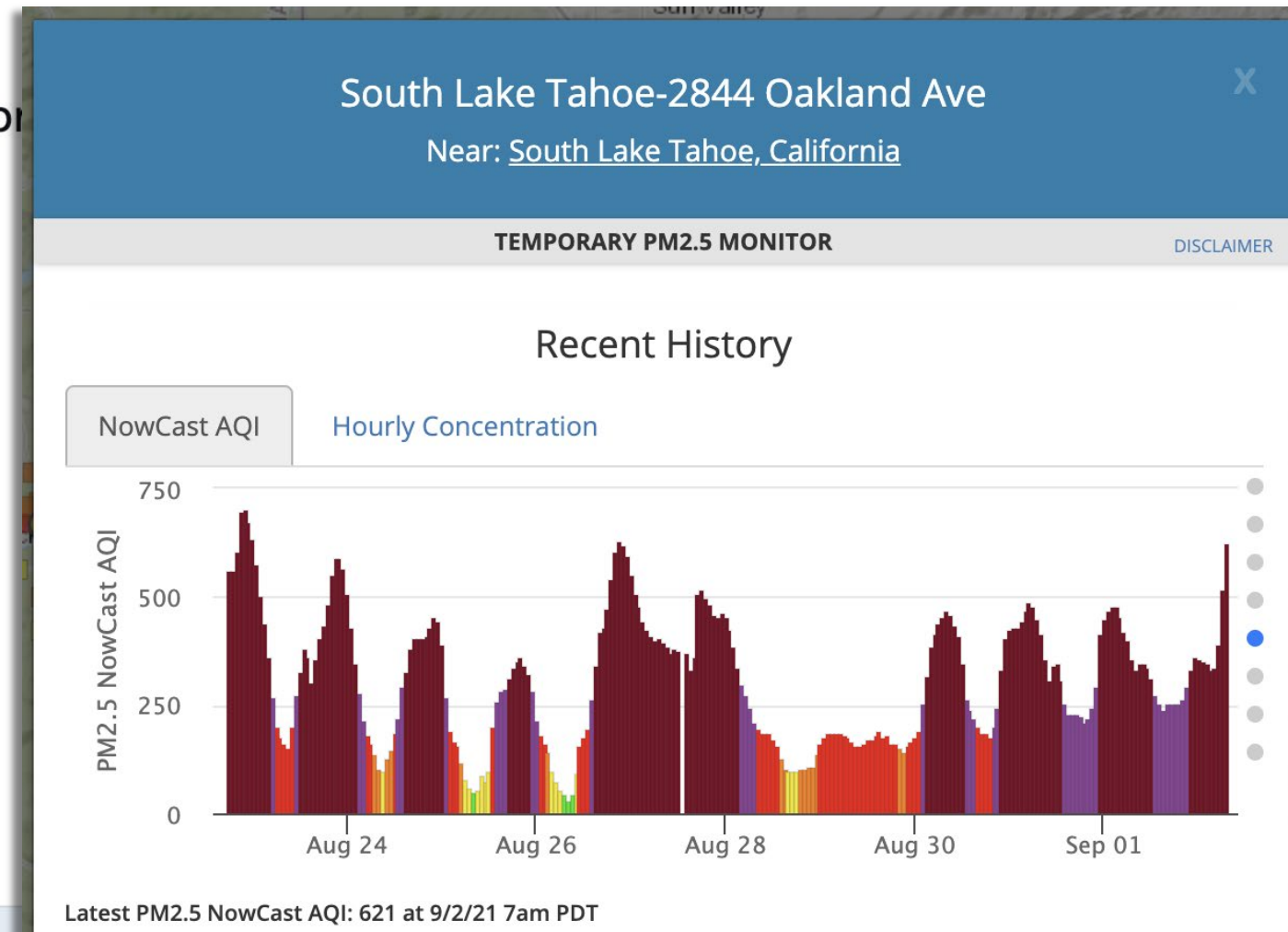
Washoe County AQMD
@WashoeCountyAQ

Top 10 worst PM2.5 days for Reno/Sparks. Monitoring for PM2.5 started in '99. [#CaldorFire](#) [#DixieFire](#) [#NorthComplexFire](#)

8/23/21-AQI 291
8/24/21-AQI 260
8/22/21-AQI 251
9/13/20-AQI 240
9/12/20-AQI 212
8/25/21-AQI 199
8/21/21-AQI 195
8/07/21-AQI 195
7/25/21-AQI 193
7/26/21-AQI 191

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health warnings of emergency conditions. The entire population is more likely to be affected.
Hazardous	301 to 500	Health alert: everyone may experience more serious health effects.

11:29 AM · Aug 27, 2021 · Twitter Web App



South Lake Tahoe - only 4 hours of “Good AQI” in an entire week ending September 2.

Does Smoke Affect The Weather?

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Yes!

Cooler high
temperatures.

Overnight lows stay
the same. Why?

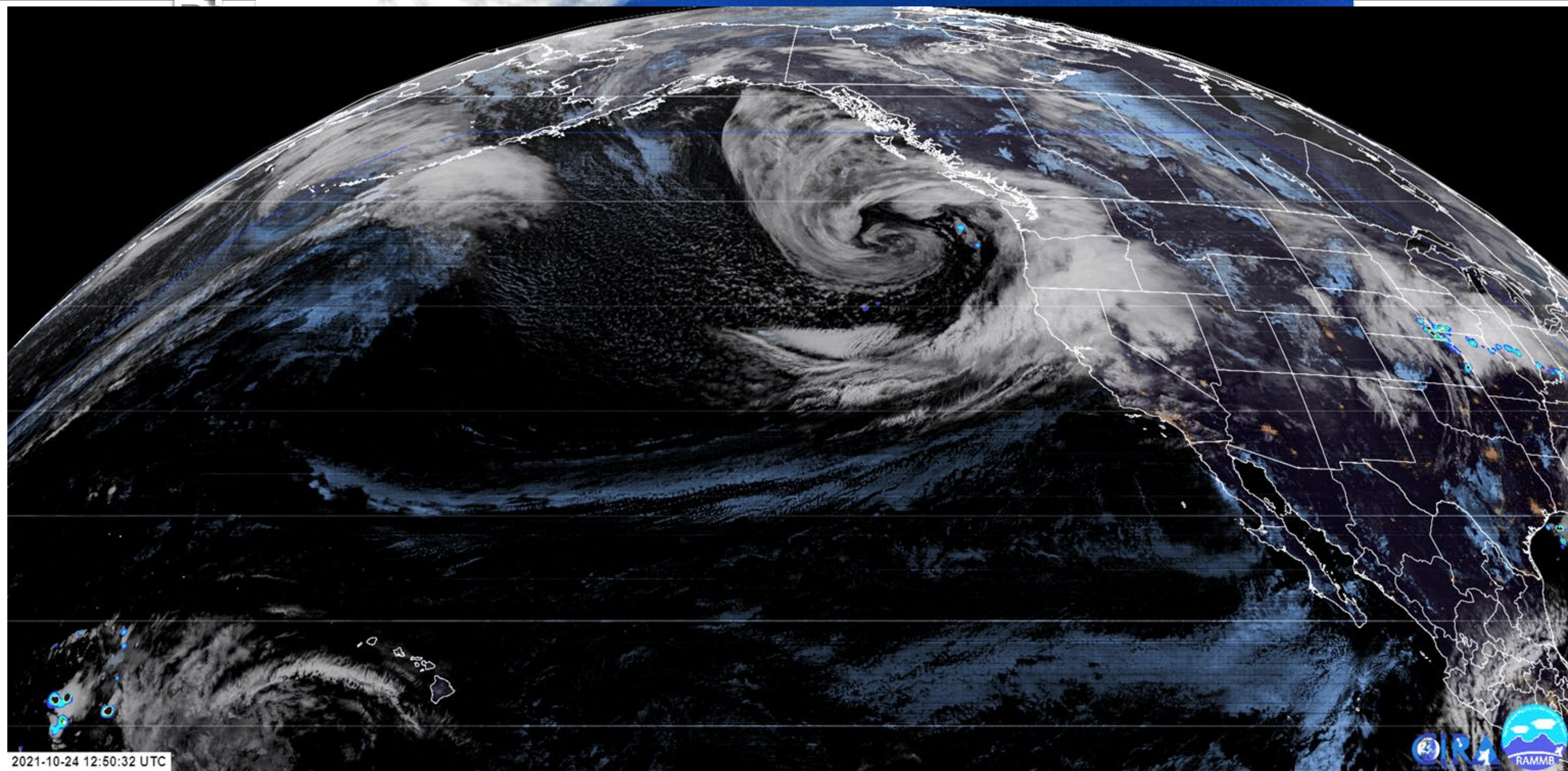
Where'd the Zephyr
wind go?





October 23-25 - Super Mega Atmospheric

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Oct 26, 2021 - Flooded fields in the Carson Valley near Genoa

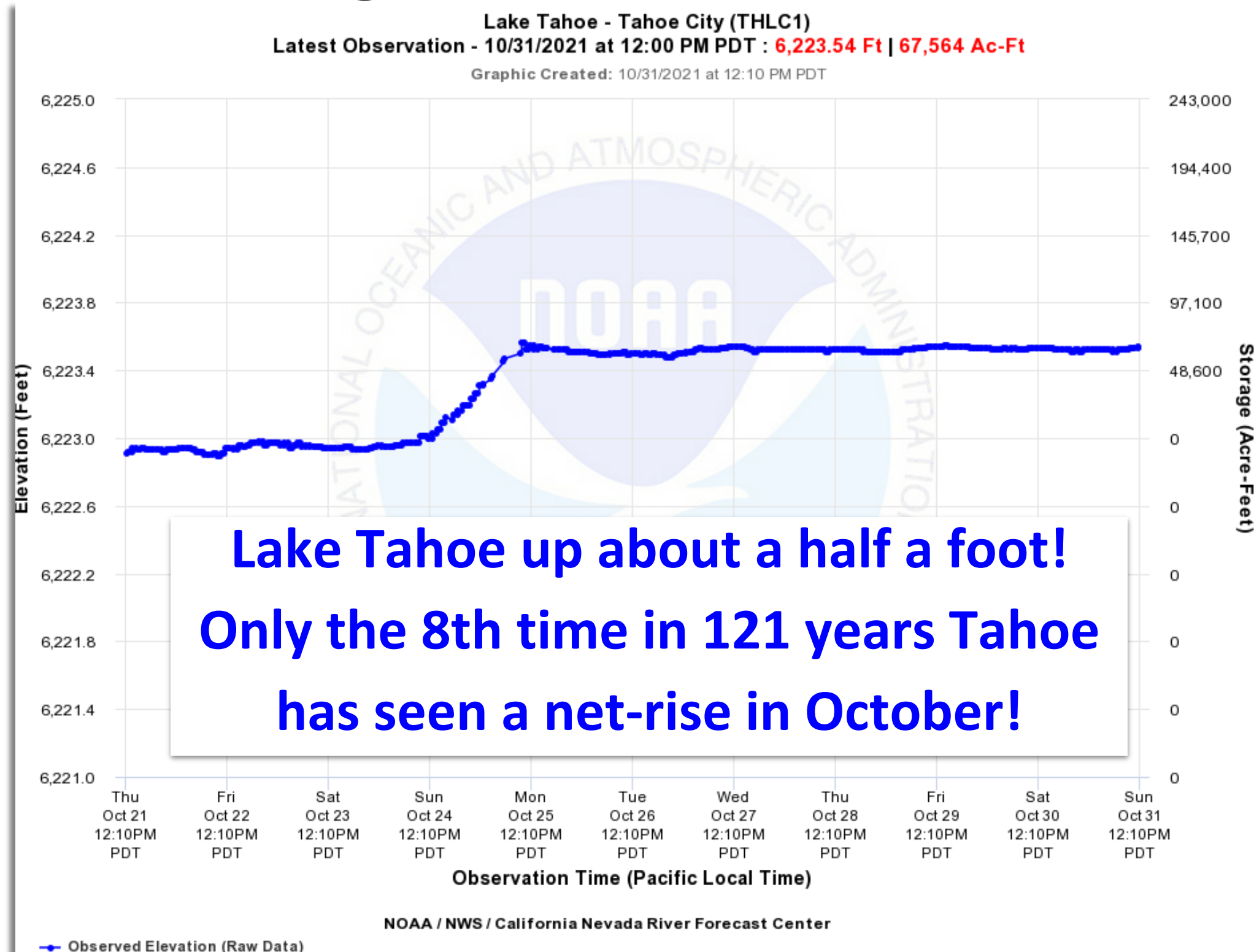


October 23-25 - Super Mega Atmospheric

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River

Hitting the Environmental Reset Button



**Storm total rain at the
Reno Airport: 2.92"**
**TOTAL for the entire
2020-21 Water Year:
3.01"**
***3rd driest on record**



October 23-25 - Super Mega Atmospheric

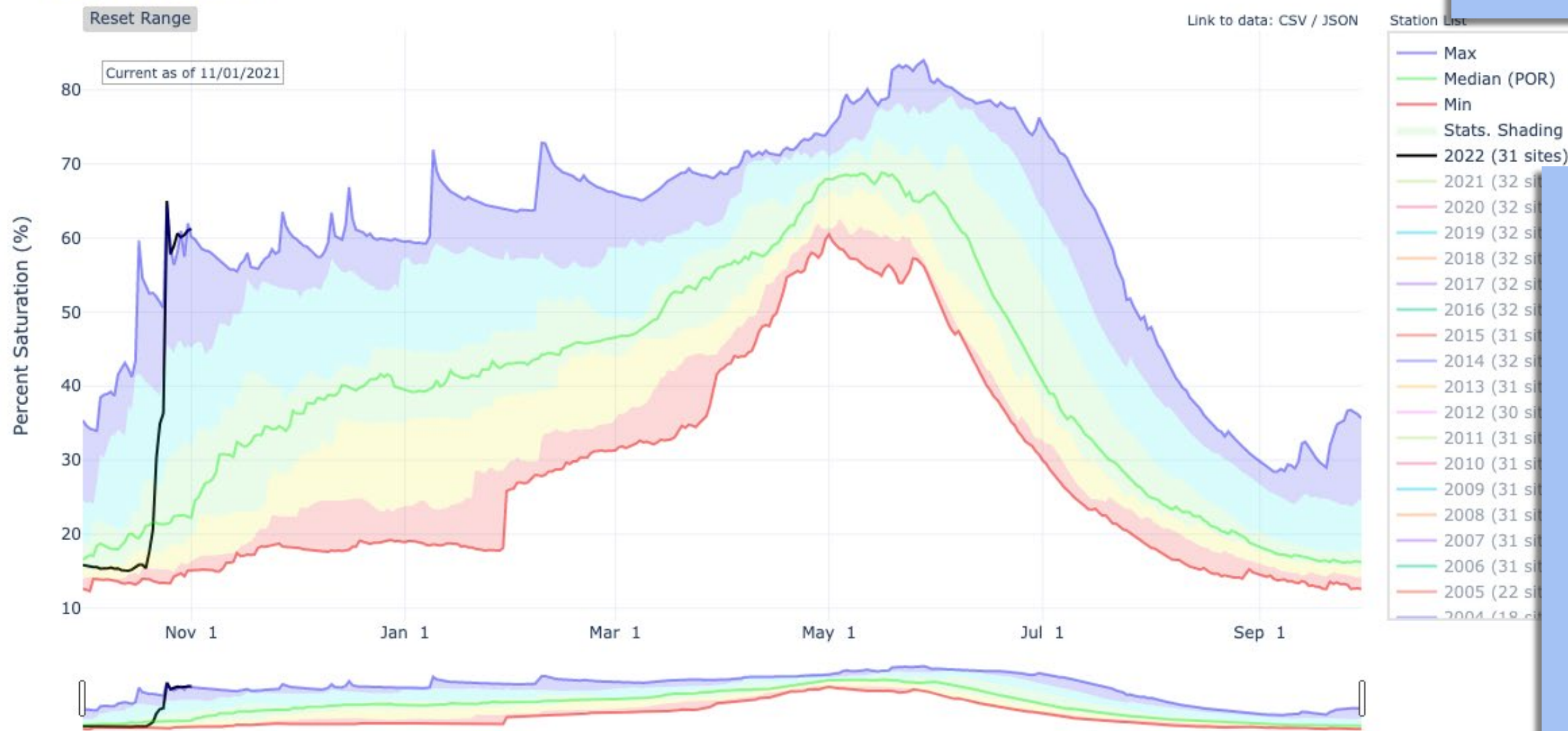
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River

Does this help the drought?

Yes! But one big storm won't totally end it.

DEPTH AVERAGED SOIL SATURATION IN EASTERN SIERRA



Soil moistures now quite high. That'll really help with runoff efficiency next spring.

So How About the Next 2 Weeks?

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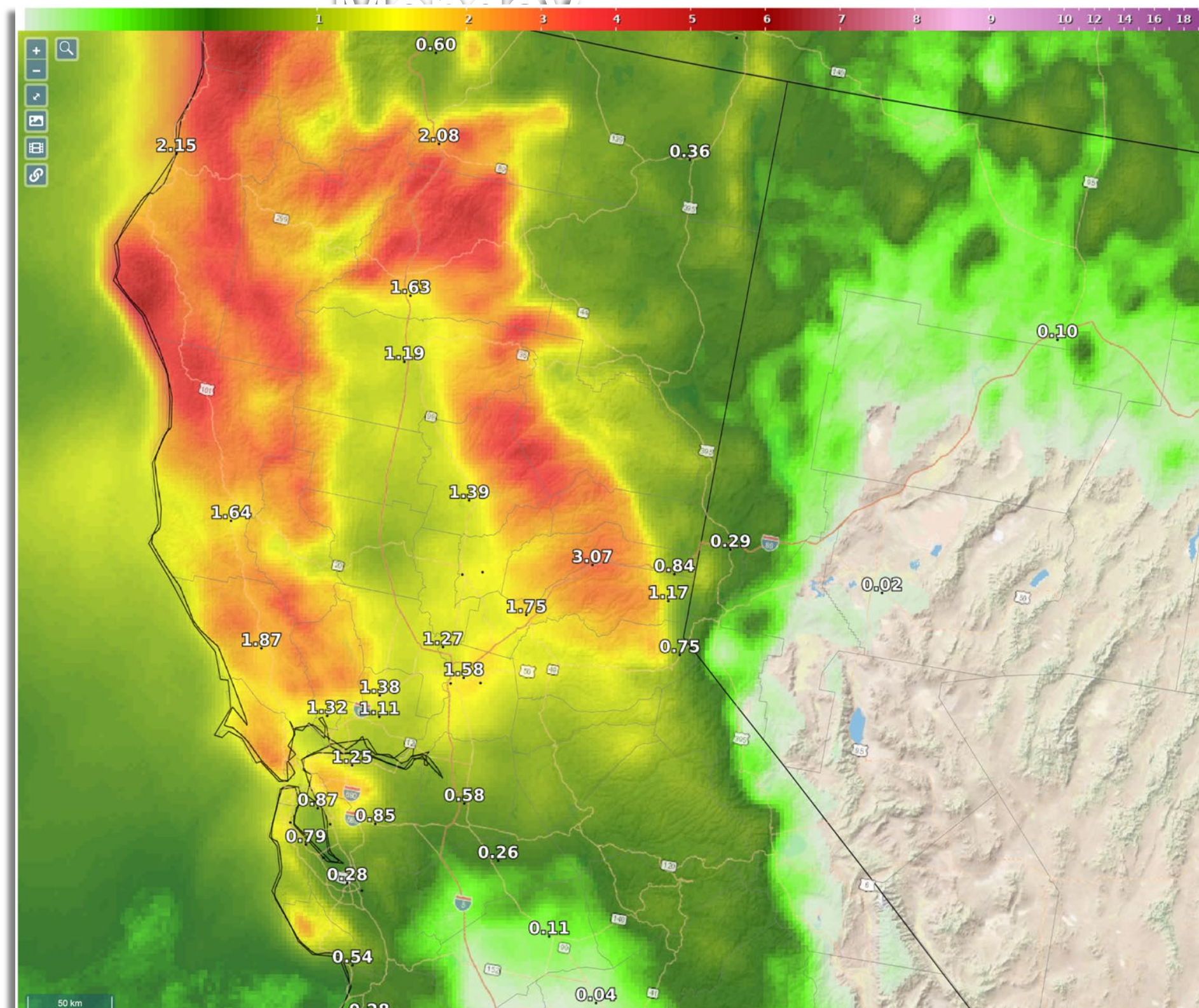
Are we in for:

- Bob Ross “nice little storms” or
- The Liquid Rage kind!?



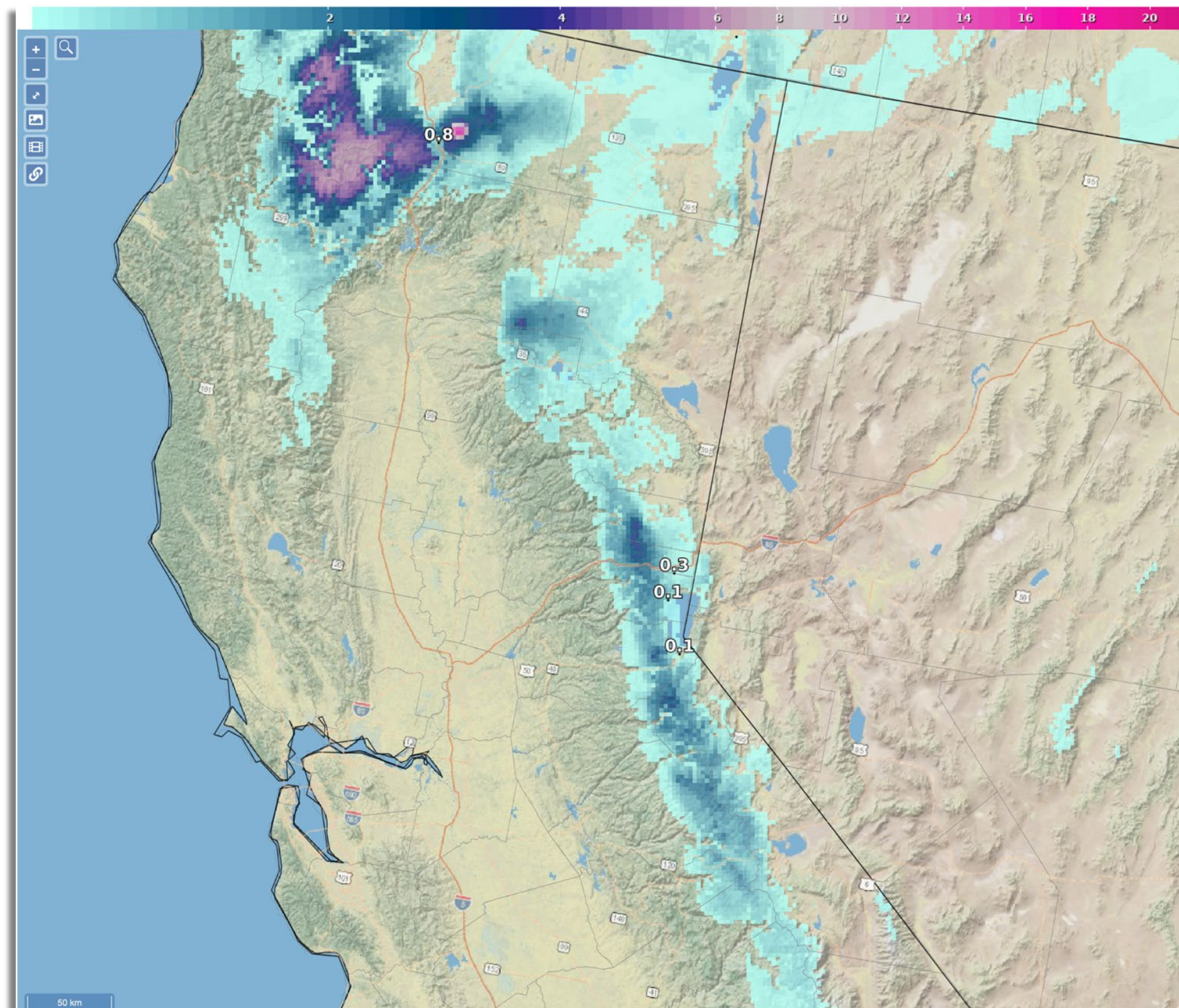
Week One: Typical Storm Thurs, More Starting

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Total forecast precipitation thru Monday November 8th.

Total forecast snowfall thru Monday November 8th.





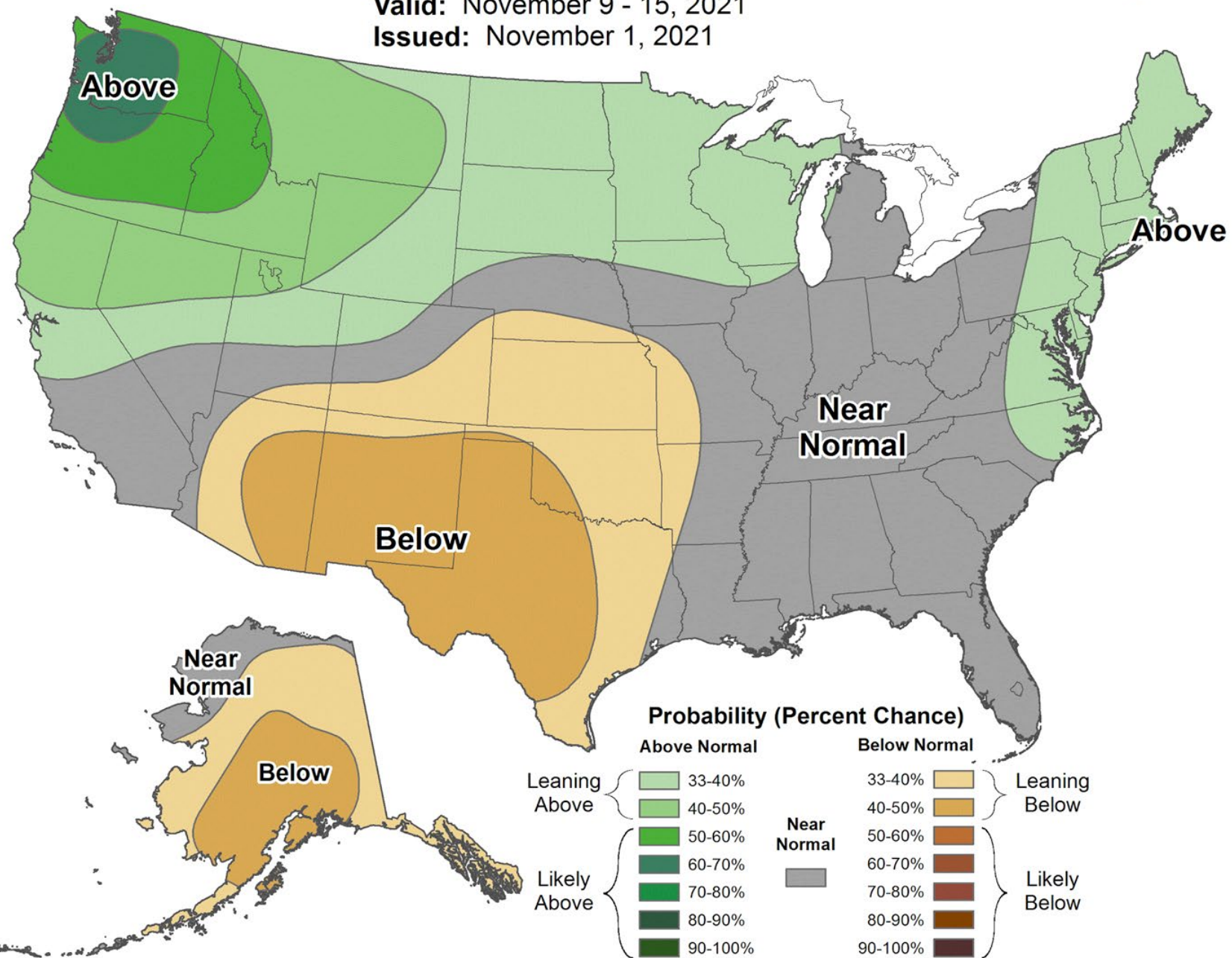
Week Two: Could be Active into mid

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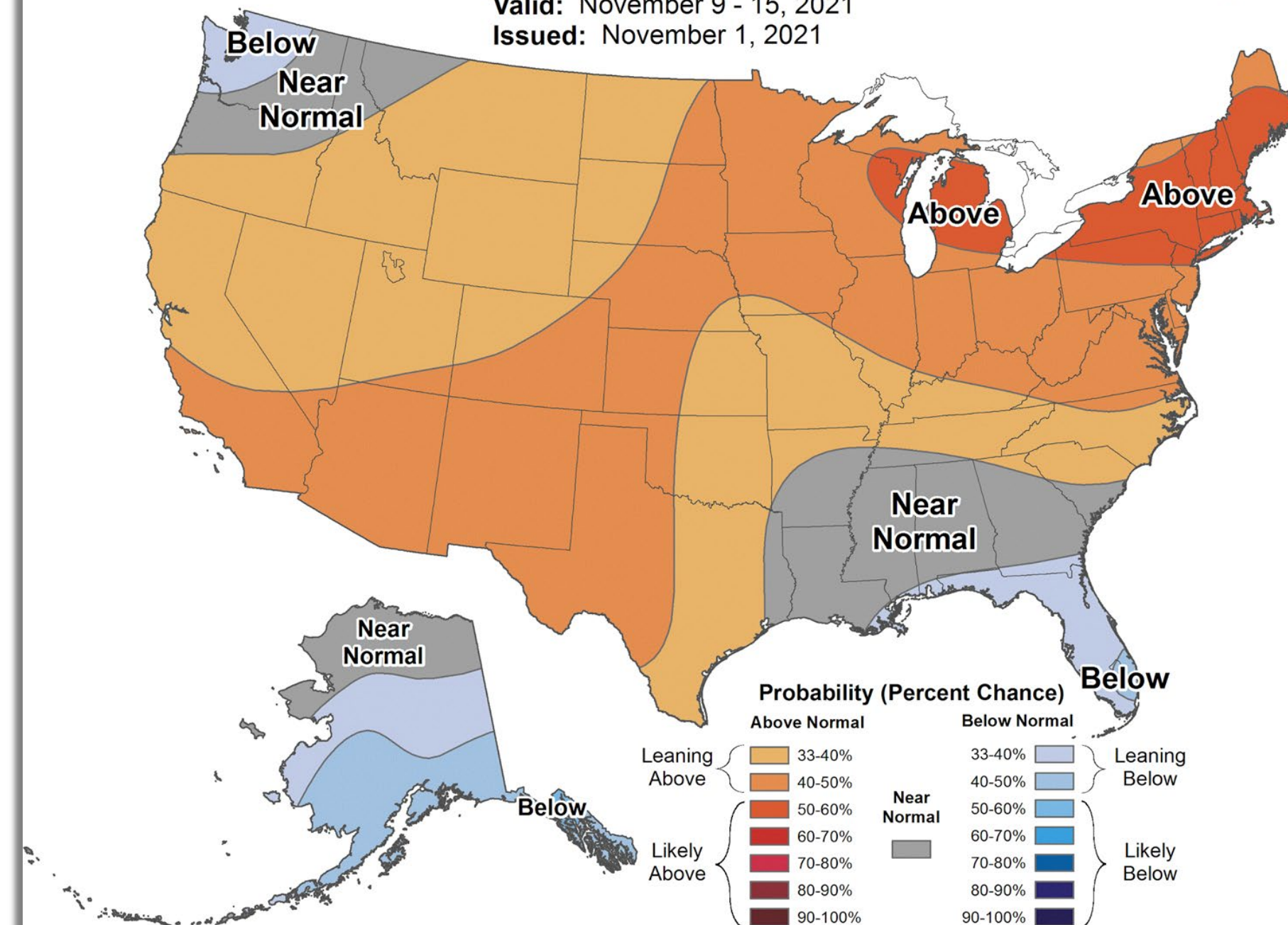
8-14 Day Precipitation Outlook

Valid: November 9 - 15, 2021
Issued: November 1, 2021

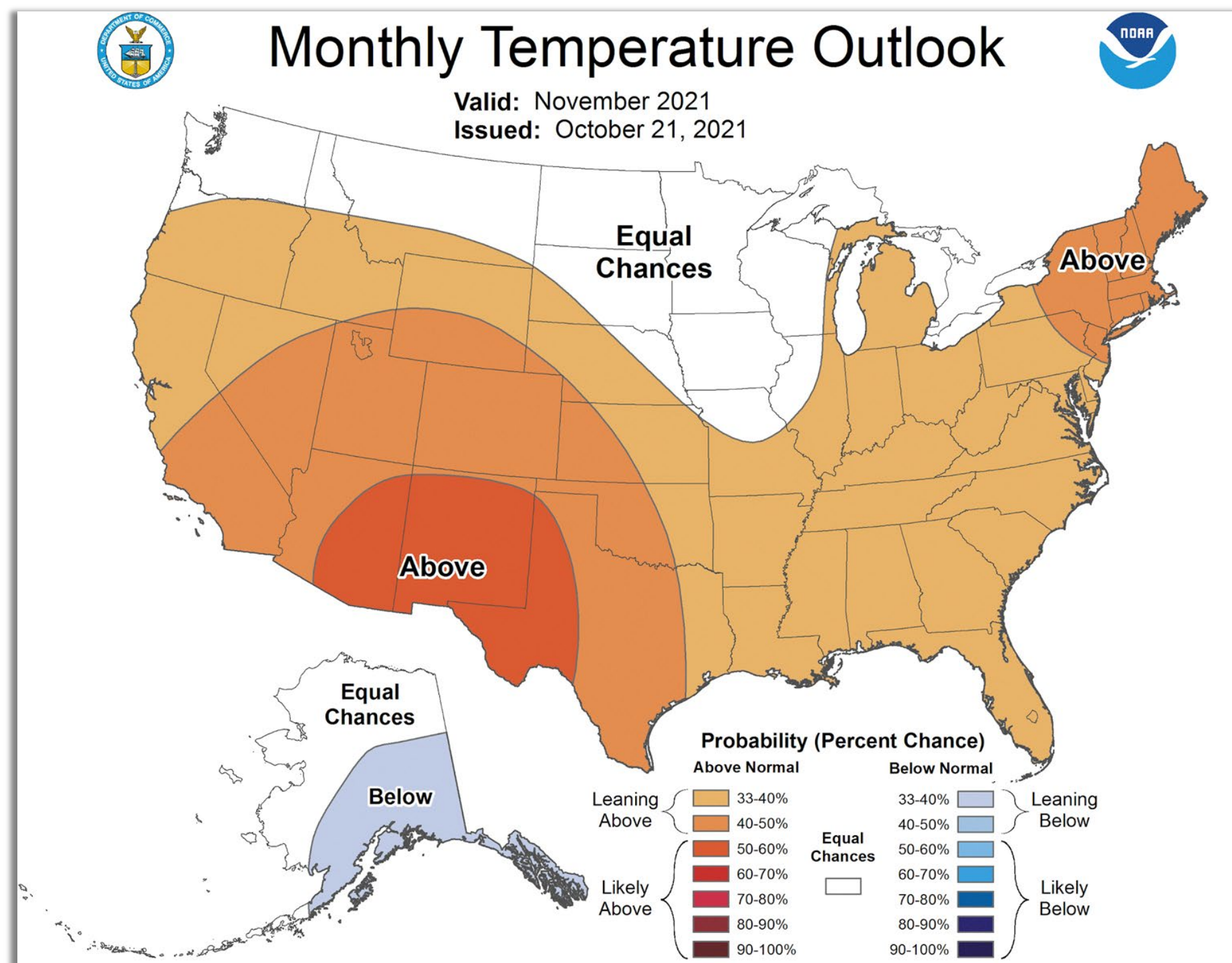
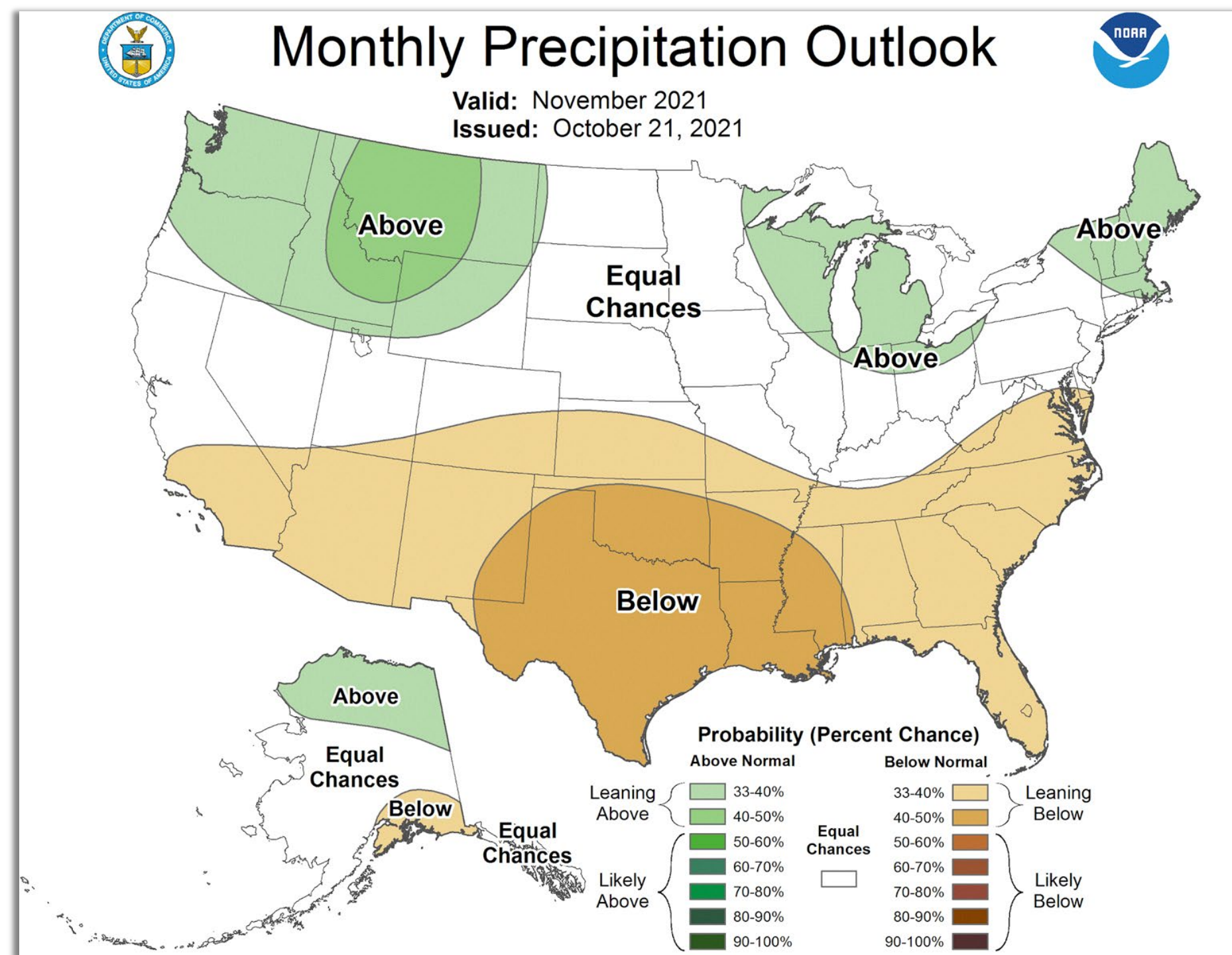


8-14 Day Temperature Outlook

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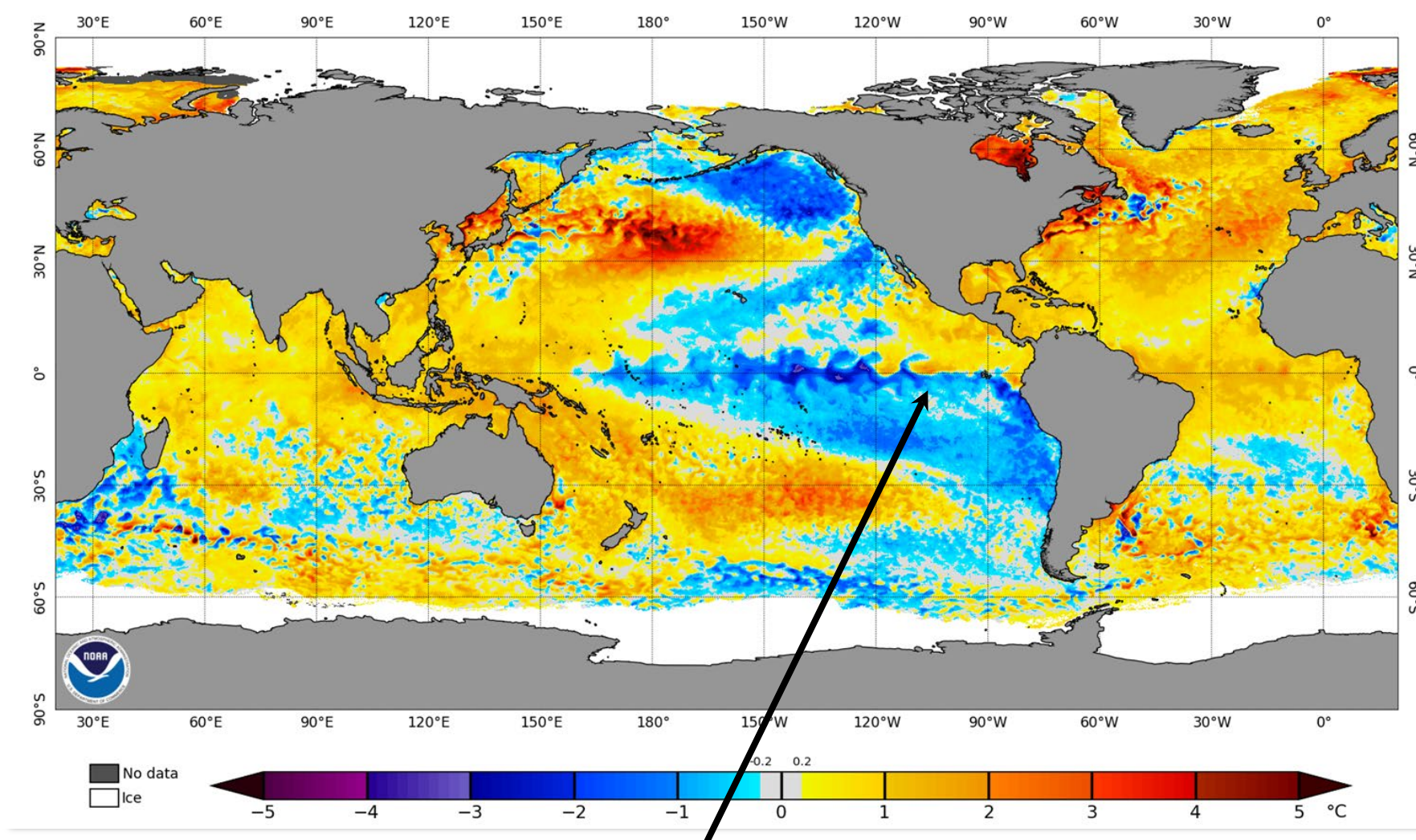


November Outlook - Easing into Winter?



Key message from the models: No favored outcome for precipitation - could be wet, could be dry, could be normal! Temperatures leaning warmer than normal overall.

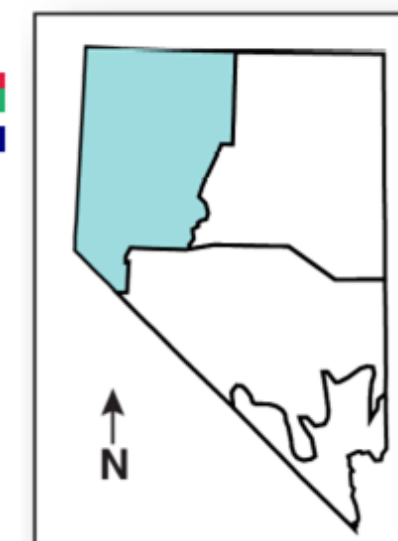
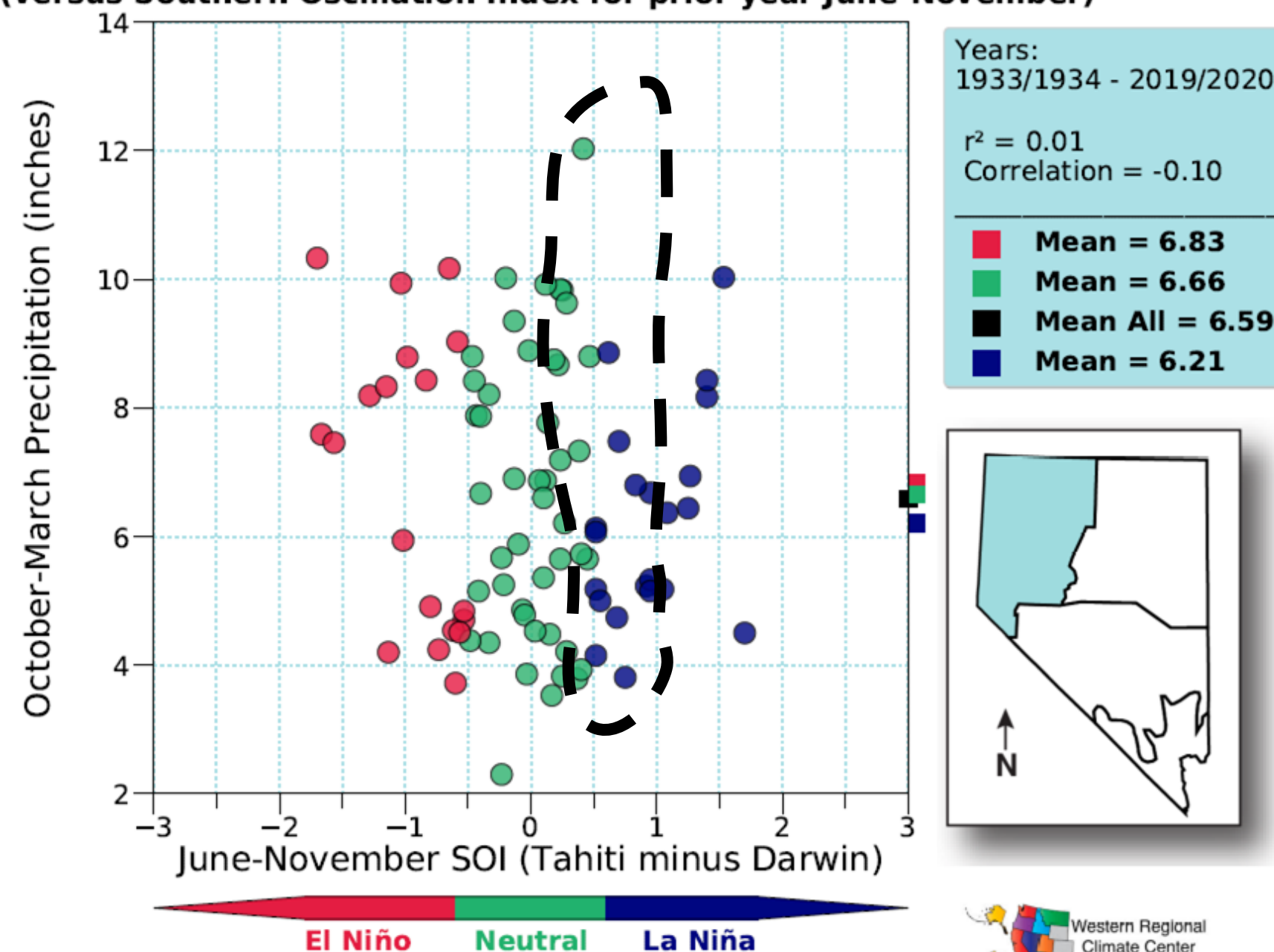
NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 30 Oct 2021



Weak-moderate La Niña situation setting up in the tropical Pacific - cooler than normal water temps.

Anything goes? Weak La Nina phases have a wide variability in precipitation for Sierra & N Nevada.

NV Division 1 October-March Precipitation
(versus Southern Oscillation Index for prior year June-November)

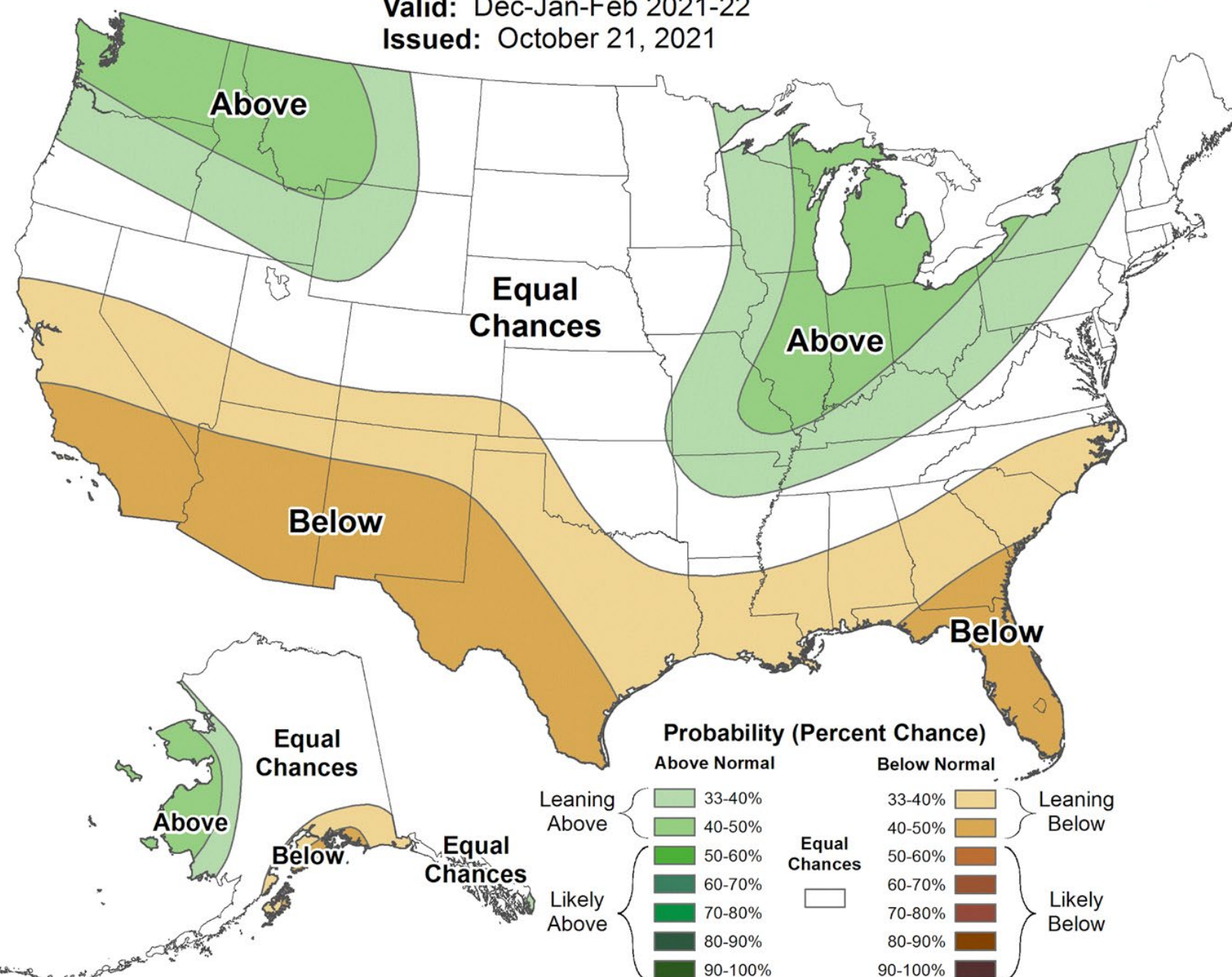




Seasonal Precipitation Outlook



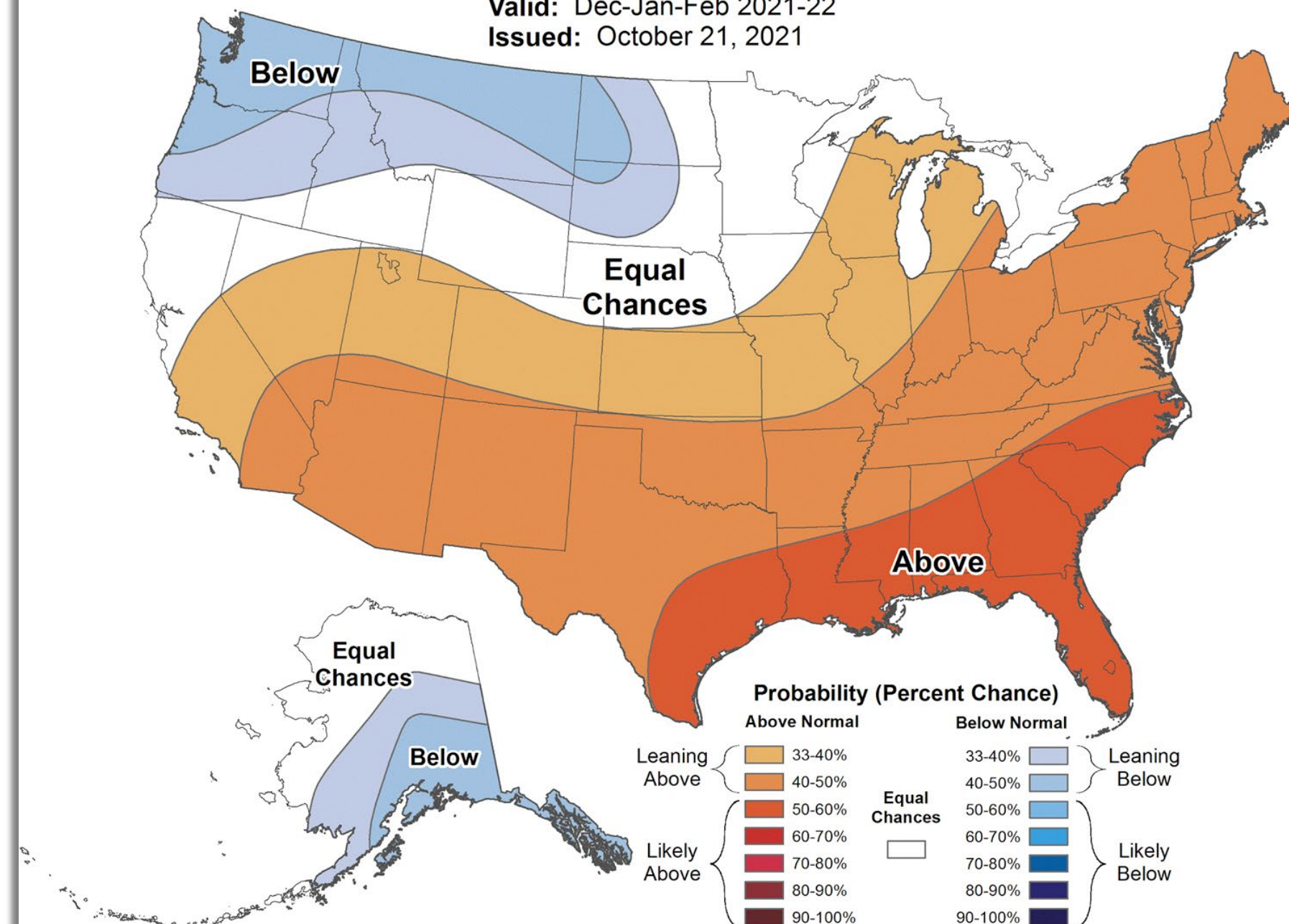
Valid: Dec-Jan-Feb 2021-22
Issued: October 21, 2021



Seasonal Temperature Outlook



Valid: Dec-Jan-Feb 2021-22
Issued: October 21, 2021



Key message from the models for December thru March: **Just about any scenario is possible. As you head south, the dice become more loaded toward a drier than normal outcome.**

Some Random Winter Outlook Thoughts

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No

Does a hot, dry summer
mean a wet winter?

Possibly

If we have a super wet
October, does that mean a
really active winter?

Unlikely

Will all the smoke in the
atmosphere affect the
winter storm track?

You Bet

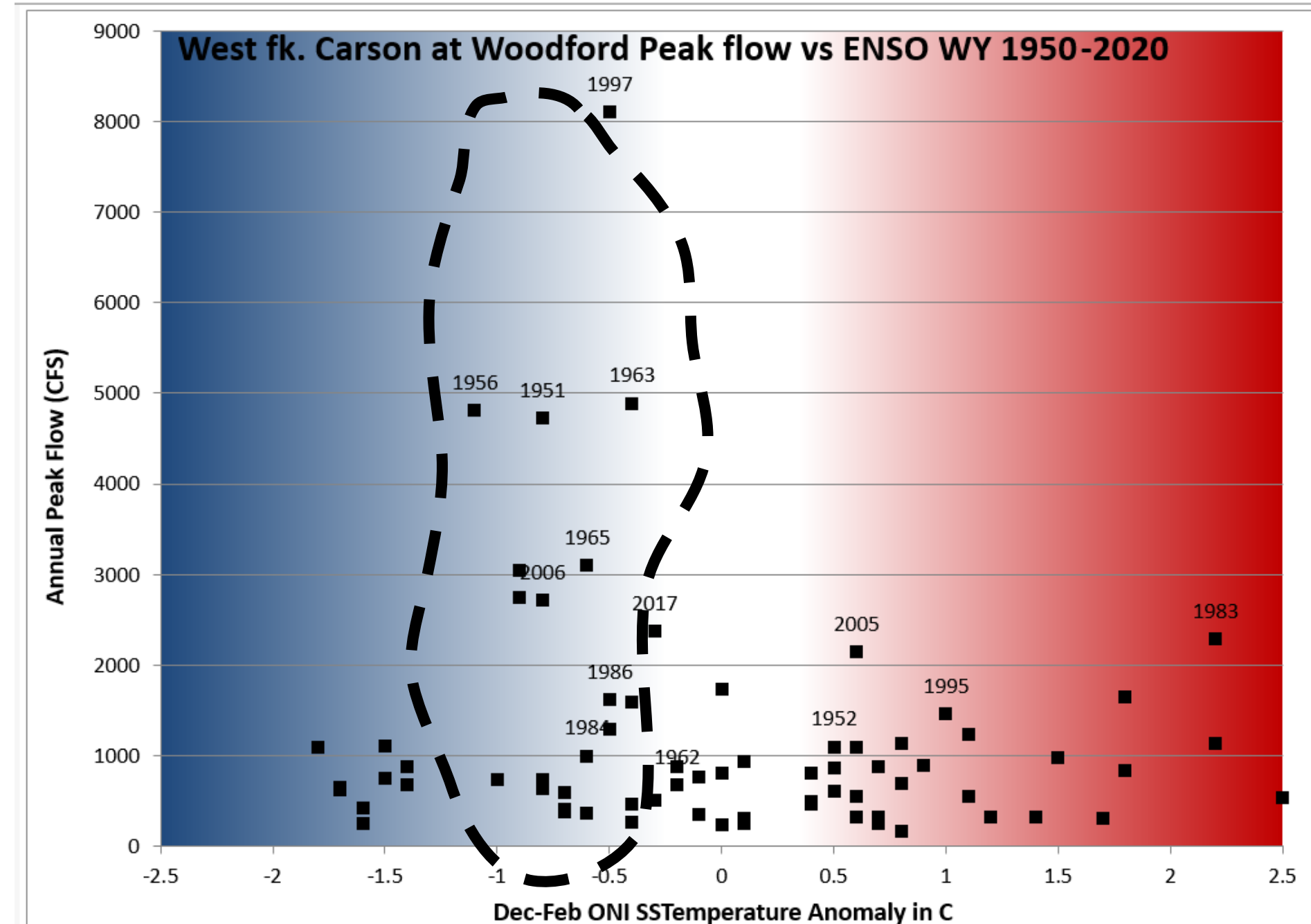
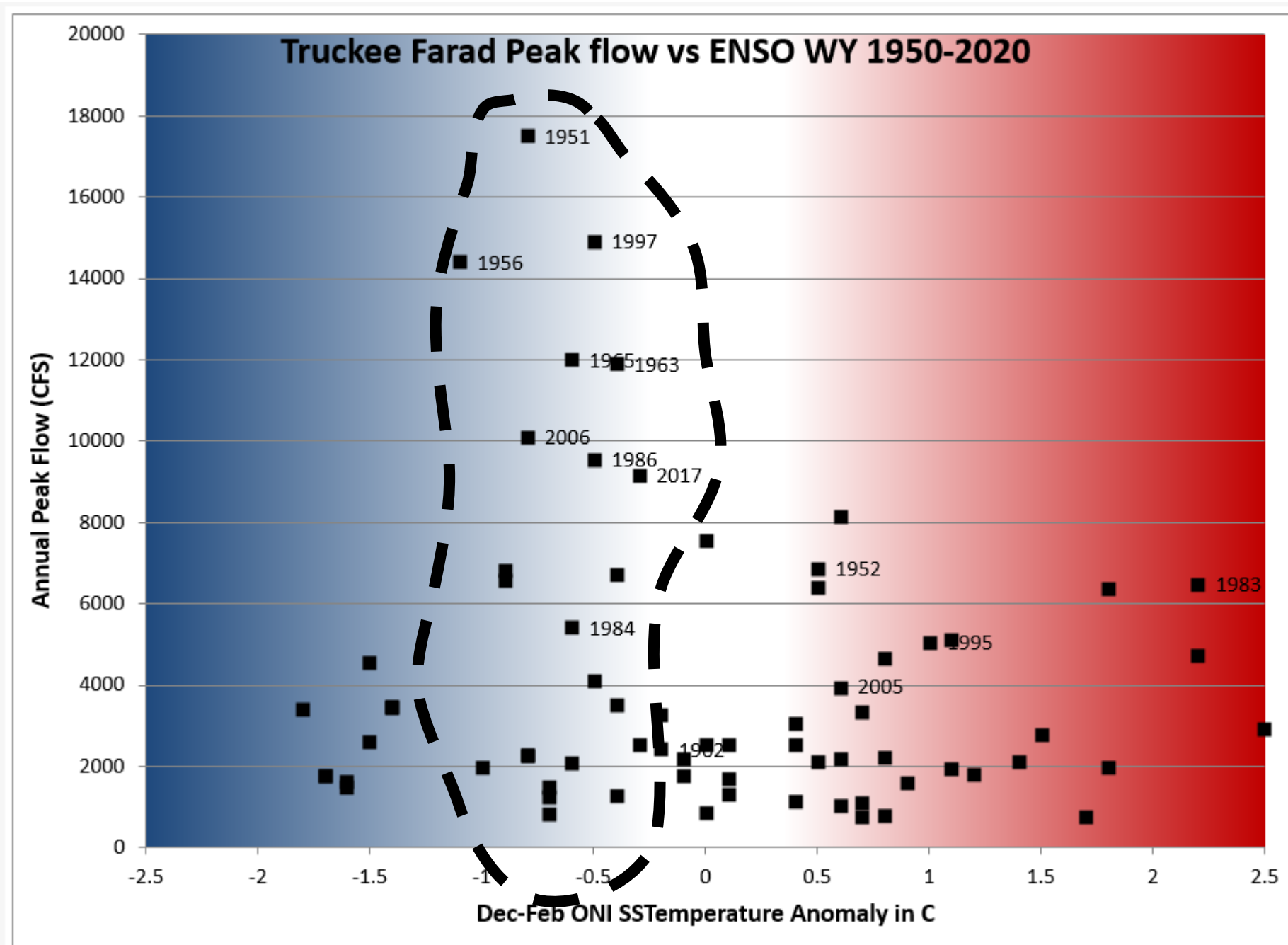
Can we have a third dry
winter in a row? See 2015...





La Niña's & Floods Is That A Thing?

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Hazard Risks for Winter 202122

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	November	December	January	February	March
River Flooding	Above normal - Oct storms really moistened the soils up.		Normal - too far out to tell but could go either way.		
Post Fire Floods	Above normal - many new burn scars prone to flooding with heavy rains.				
Fires	Normal - depends on if we see a wet or dry winter.				
Heavy Snow	Normal - Expect a few periods of heavy snow even if we end up with another dry winter.				
Unusual Cold	Normal - nothing in the data to swing us one way or another here. Expect cold periods even if we end up with a mild winter.				
Poor Air Quality	Normal - typically worst air due to temperature inversions is December-January.				

**these risk assessments are relative to typical years, and are based on current conditions plus weekly/monthly weather outlooks.*