

Weather and Water Outlook

Snow at last!

Northern Nevada Forecast Meeting 2/11/2021

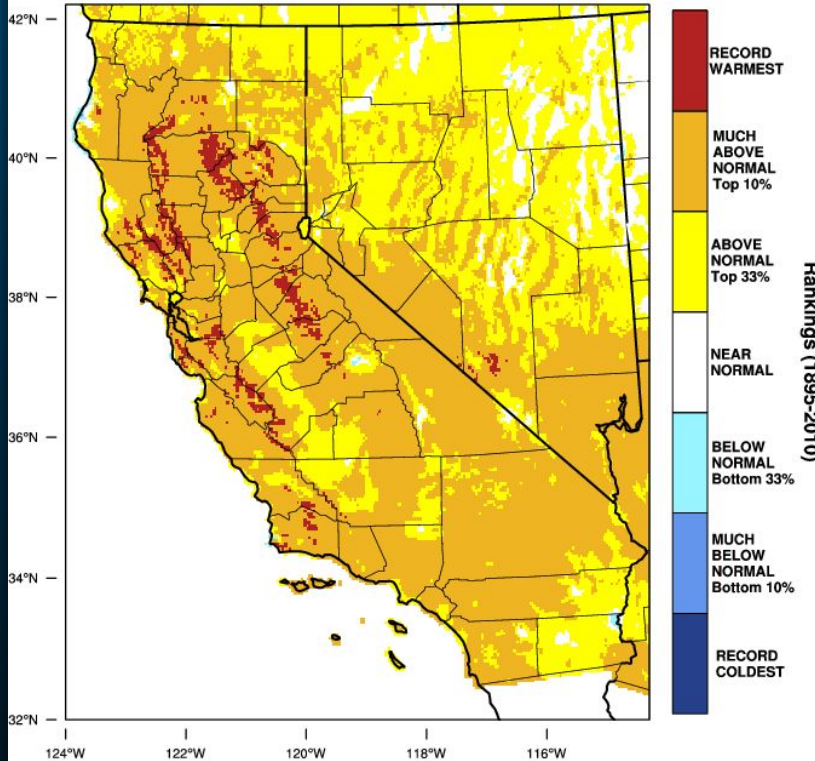
Tim Bardsley tim.bardsley@noaa.gov



Image credit Caltans District 9. Hwy 395

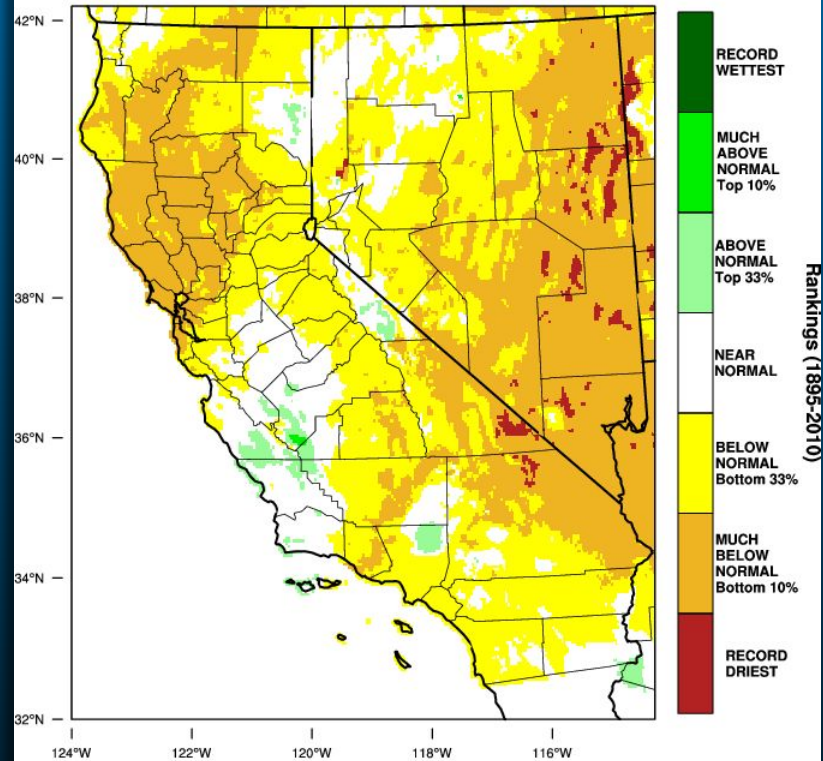
Looking Back at the Last 4 Months

California - Mean Temperature
October-January 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 FEB 2021

California - Precipitation
October-January 2021 Percentile

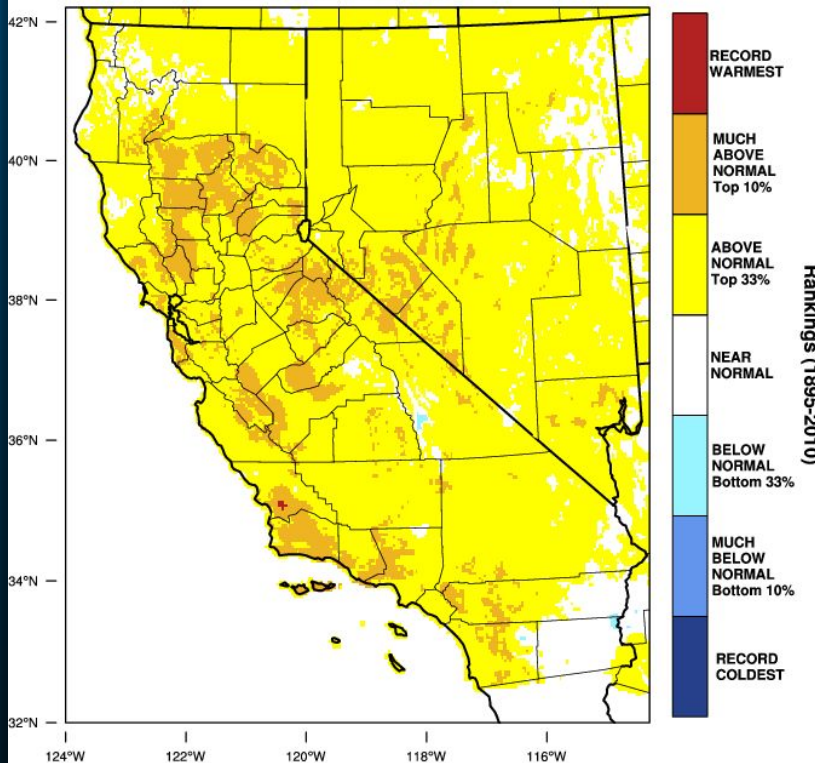


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 FEB 2021

And how did January stack up?

California - Mean Temperature

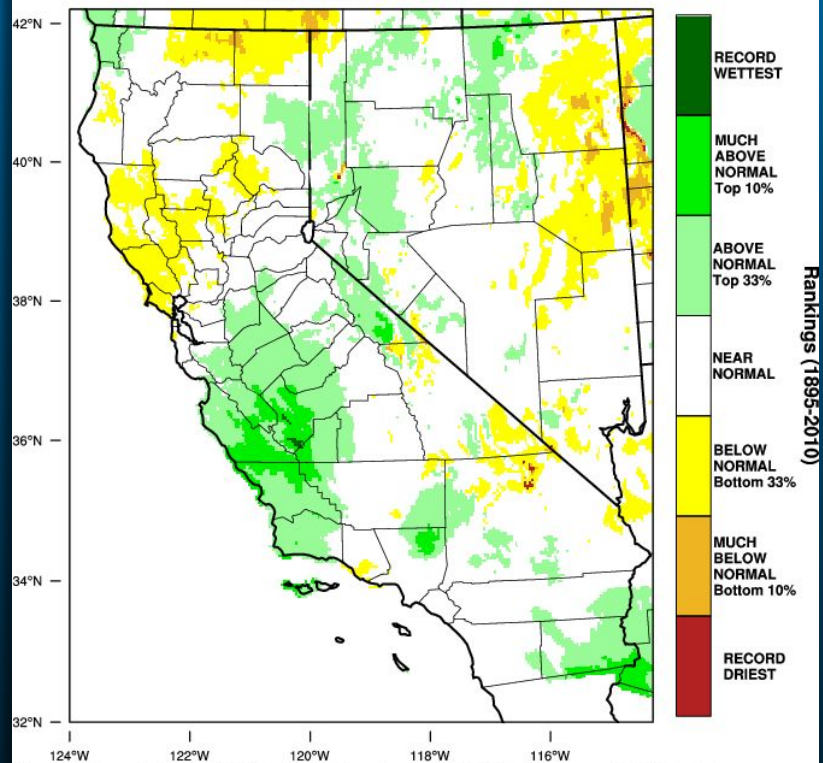
January 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 FEB 2021

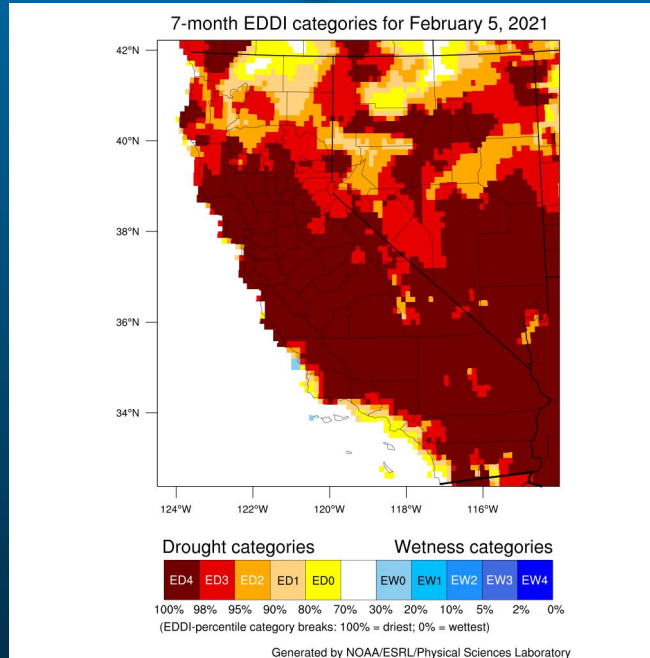
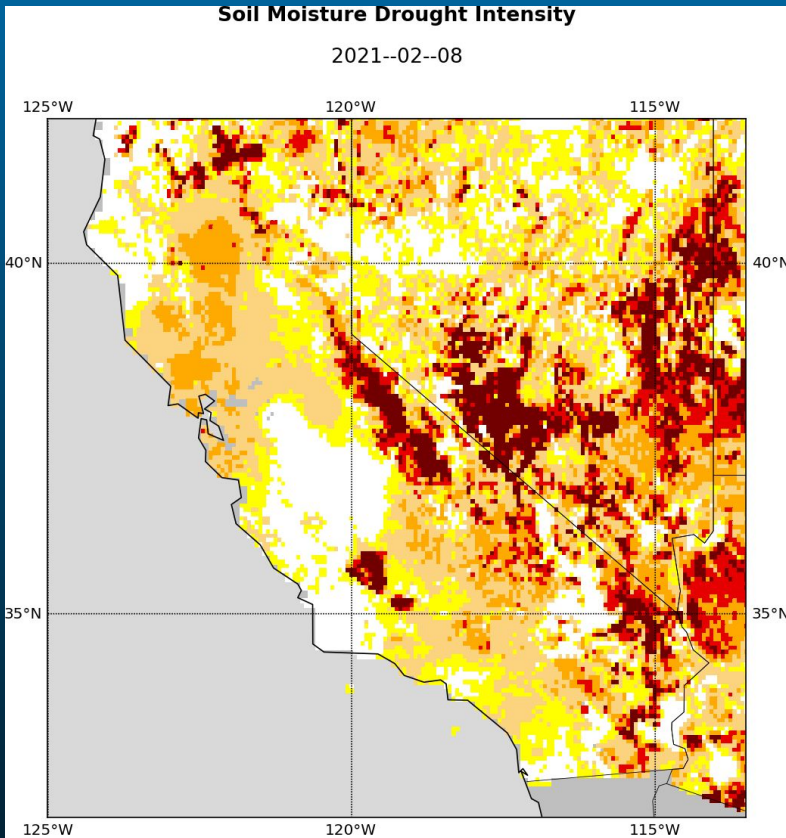
California - Precipitation

January 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 FEB 2021

Modeled Soil Moisture and Evaporative Demand



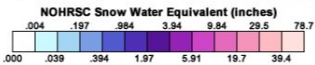
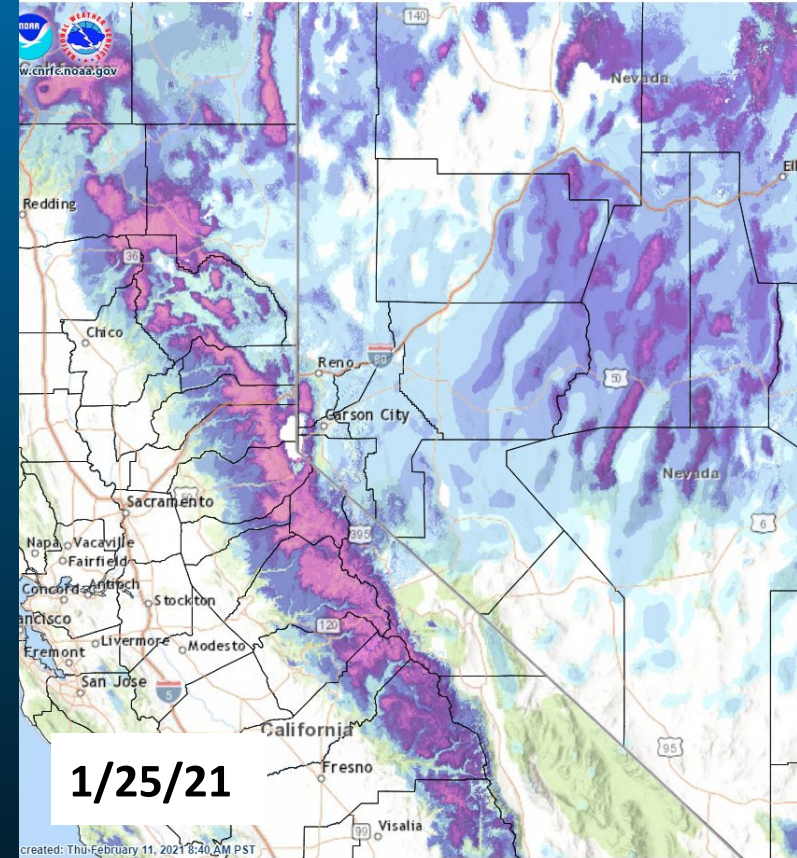
Modeled Soil Moisture- similar picture to observations, including rangelands.

Evaporative Demand elevated for water year, but even worse summer and fall.

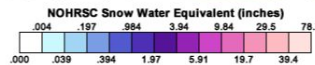
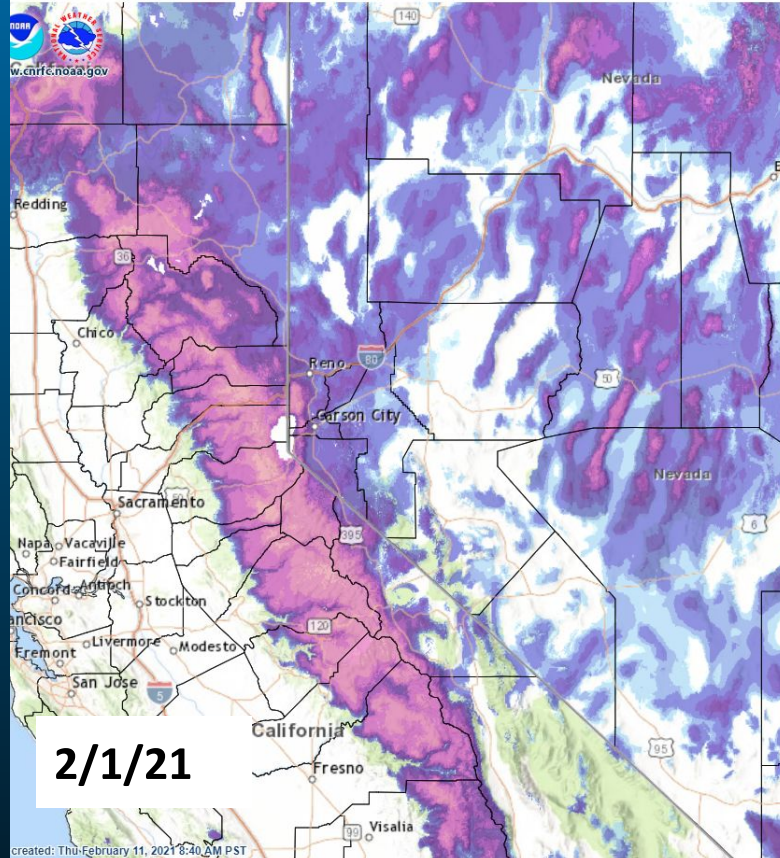
None (33.1%)	D3 (Extreme Drought, 7.9%)
D0 (Abnormally Dry, 15.4%)	D4 (Exceptional Drought, 6.3%)
D1 (Moderate Drought, 24.1%)	No Data (0.0%)
D2 (Severe Drought, 13.2%)	

Late January Snow - NOHRSC Modeled SWE

Snow Water Equivalent from NOAA's NOHRSC

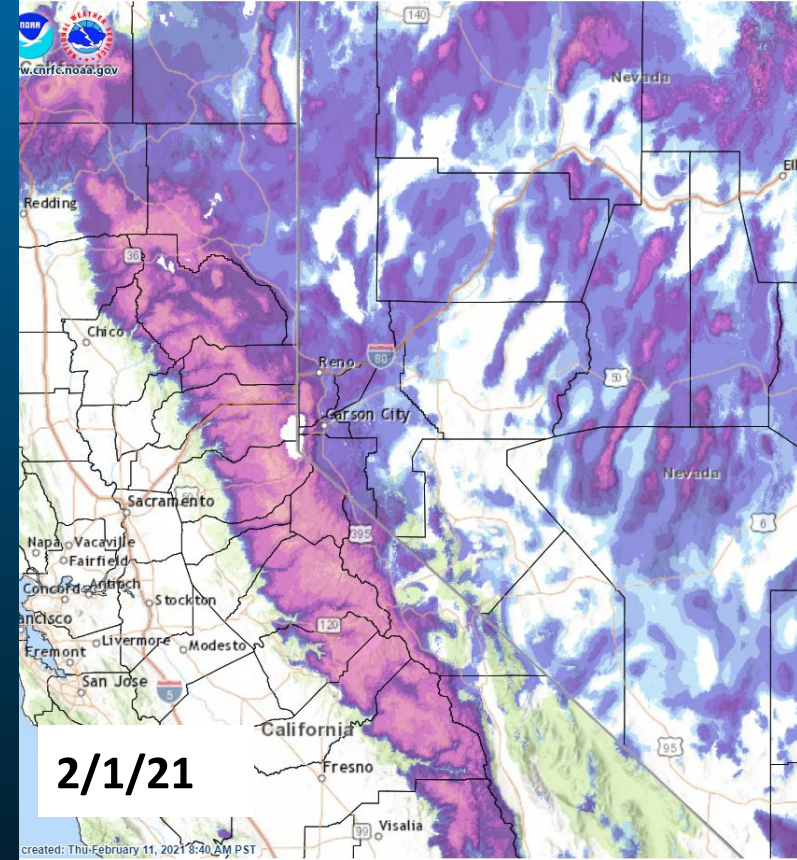


Snow Water Equivalent from NOAA's NOHRSC

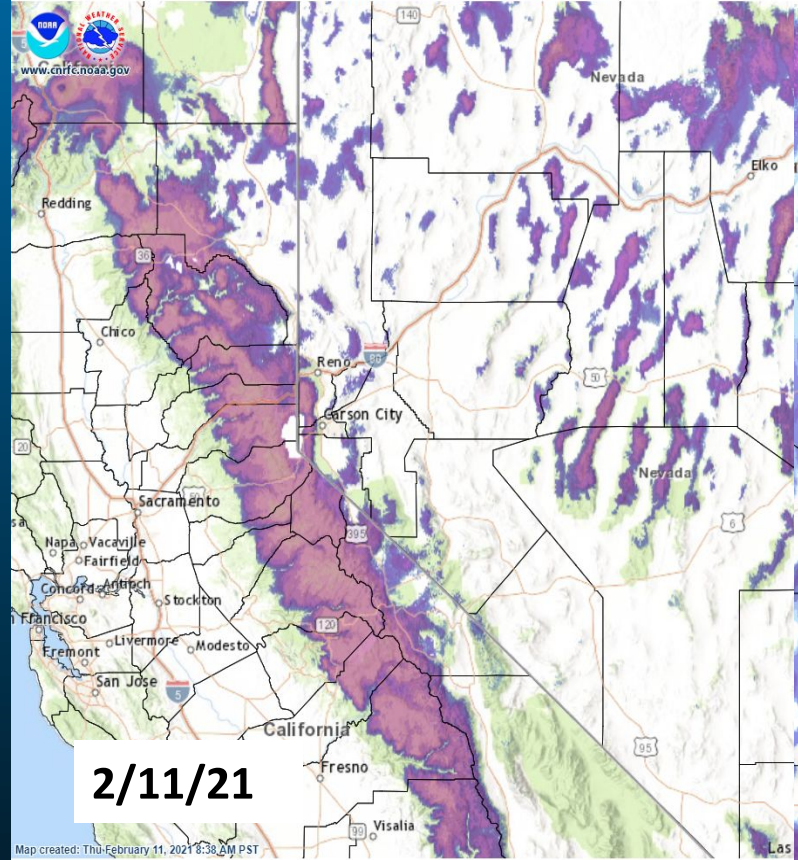


Late January Snow - NOHRSC Modeled SWE

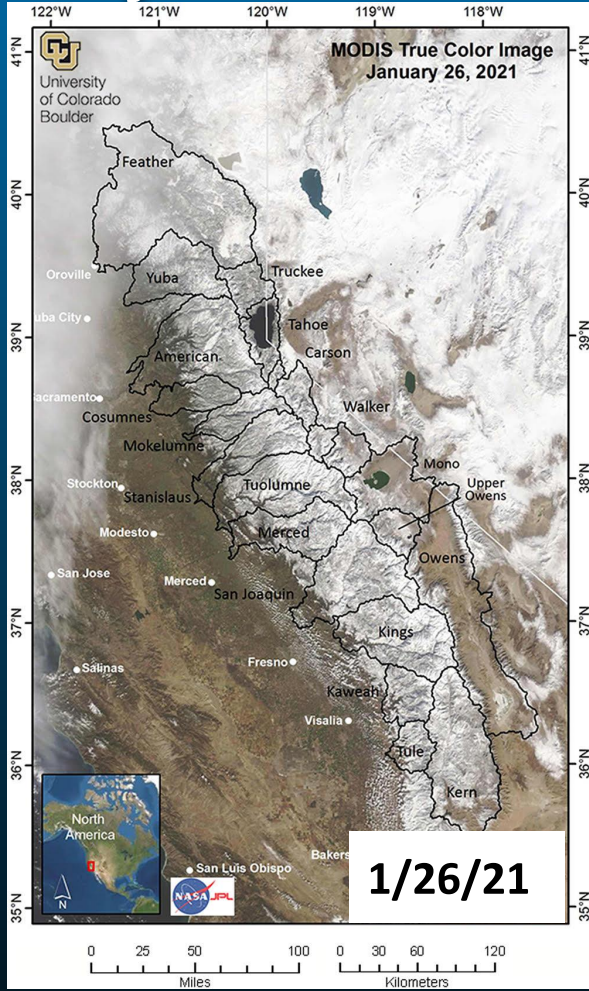
Snow Water Equivalent from NOAA's NOHRSC



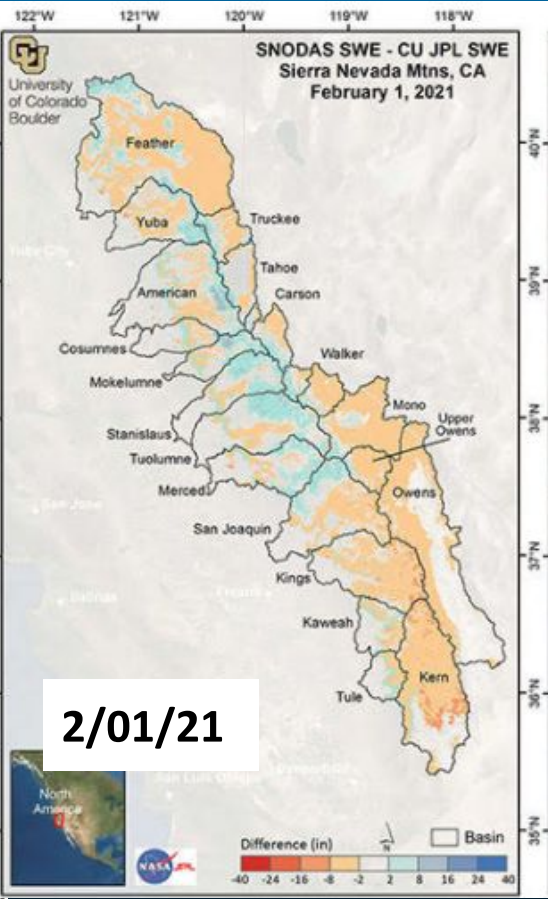
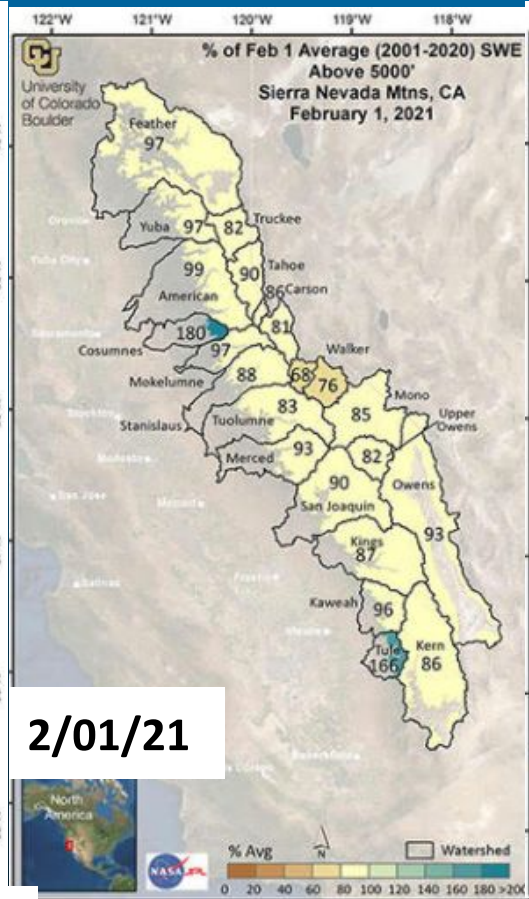
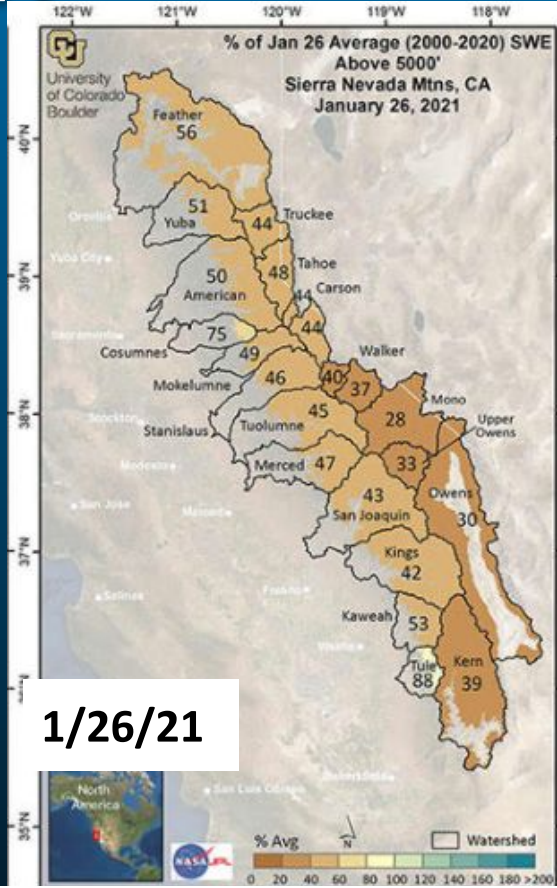
Snow Water Equivalent from NOAA's NOHRSC



Late January Snow- Satellite View



CU/JPL Distributed SWE Model



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Situational Awareness - When Should I Freak Out?

NWS Reno's 7-14 Day Scan for Upcoming Weather across the Eastern Sierra and Western Nevada

	Thurs ^{2/11}	Fri ^{2/12}	Sat ^{2/13}	Sun ^{2/14} 	Mon ^{2/15}	Tues ^{2/16}	Wed ^{2/17}	W2 ^{2/18-25}
Wind	Gusty W/SW winds but nothing too strong. Typical travel impacts wind prone areas.		Gusty winds w/ cold front. Strong NW wind potential esp. Mineral Co. w/ blowing dust.	Gusty W/NW winds.	Could be another round of gusty W-NW winds	Typical breezy N/NW winds.		Latest simulations are trending less busy for the balance of next week. If we were to get a storm it would likely be lower-end. Stand by... Week 3-4 outlooks trending drier than normal.
Snow	Quick moving low-moderate end storm, mainly this afternoon into Friday morning. Snow impacts for Sierra passes, rain/snow mix mountain towns, light rain showers for W Nevada valleys.		Main impacts Sat AM. Snow impacts Sierra passes and towns, rain/snow mix foothills, light rain W.NV valleys.	A break expected in between storms.	Another low-moderate level storm possible. Snow amounts not too impressive but still may yield some travel impacts across Sierra.		Break in the weather.	
Flooding	No major concerns but keep an eye on clogged drains during rains.				Looking fine.			
Fire Weather	All good.							Still damp.
Unusual Temps	Continued mild for this time of year.	Cooler w/ front on Sat, but remaining not too far from normal.			Slightly above normal temps?			Near normal.
Ventilation	Looking pretty good! Even on days with lighter winds there's enough mixing to keep valley ventilation decent.							TBD.

What Does This Mean? Integrates impacts and confidence

No worries



Low freakoutness



Moderate freakoutness



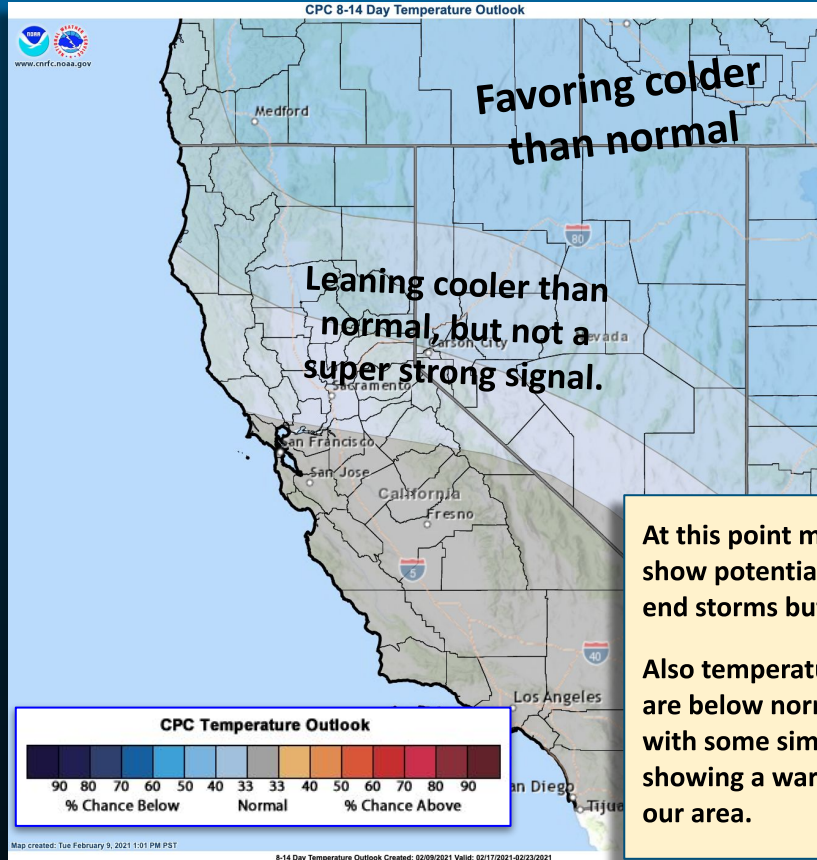
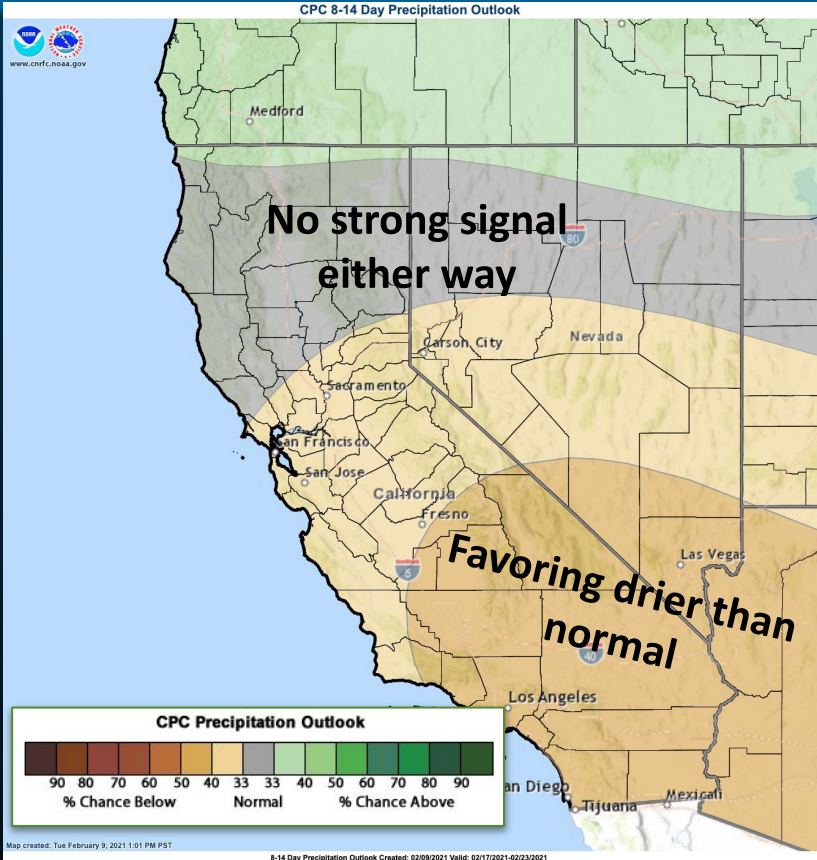
High freakoutness



Really bad



Next Week: Storms Possible But Likely Lower-End



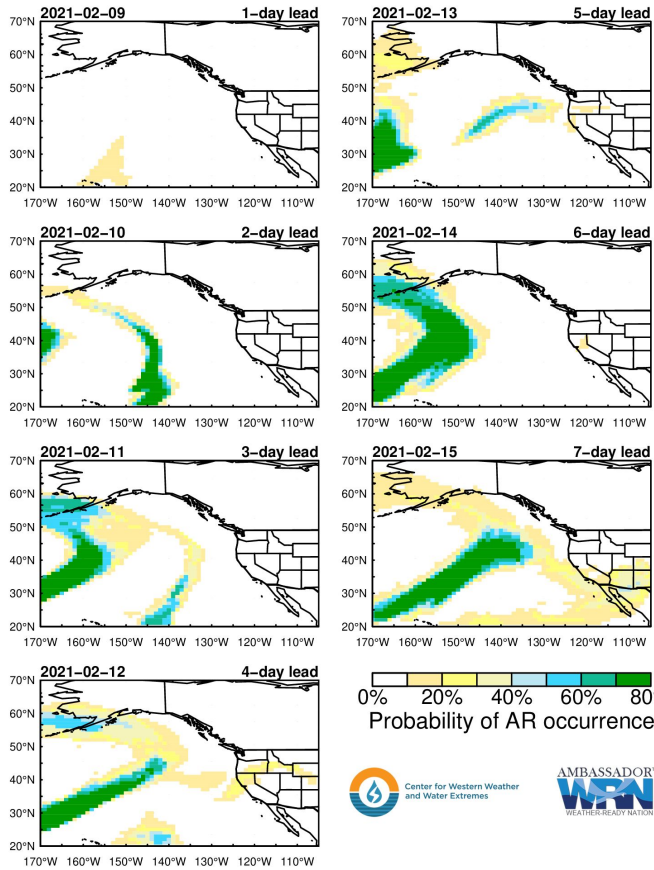
At this point most simulations show potential low-moderate end storms but not a given.

Also temperature forecasts are below normal confidence with some simulations even showing a warming trend for our area.

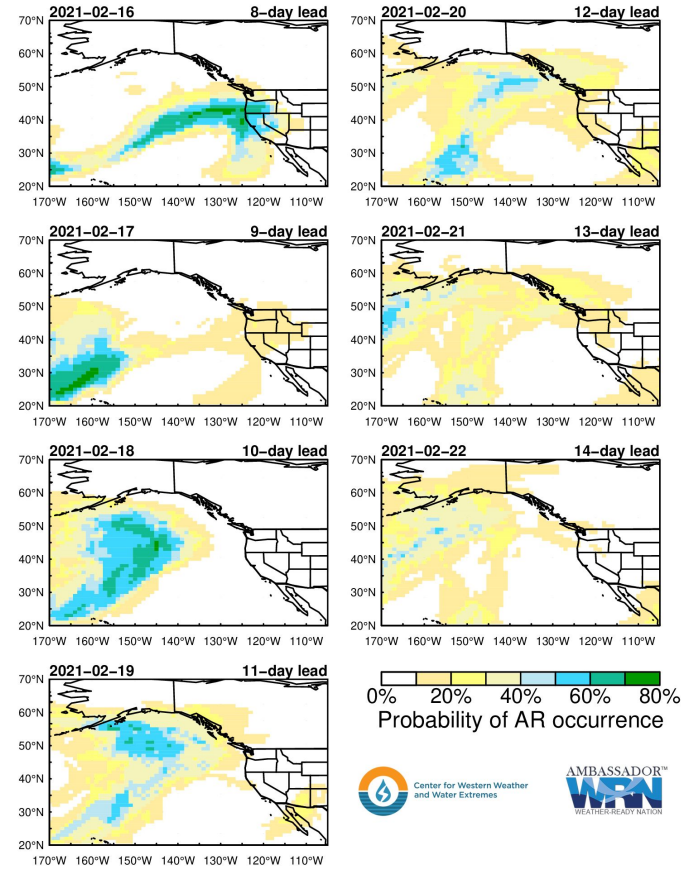


Atmospheric River Outlook

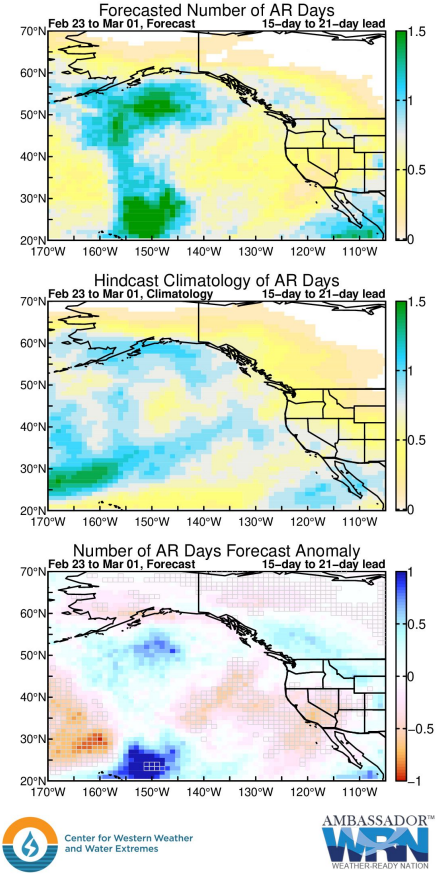
NCEP Forecast Initialized: Feb 08, 2021



NCEP Forecast Initialized: Feb 08, 2021



NCEP Experimental Forecast Initialized: Feb 08, 2021



Late February - Late March Temp/Precip Outlook

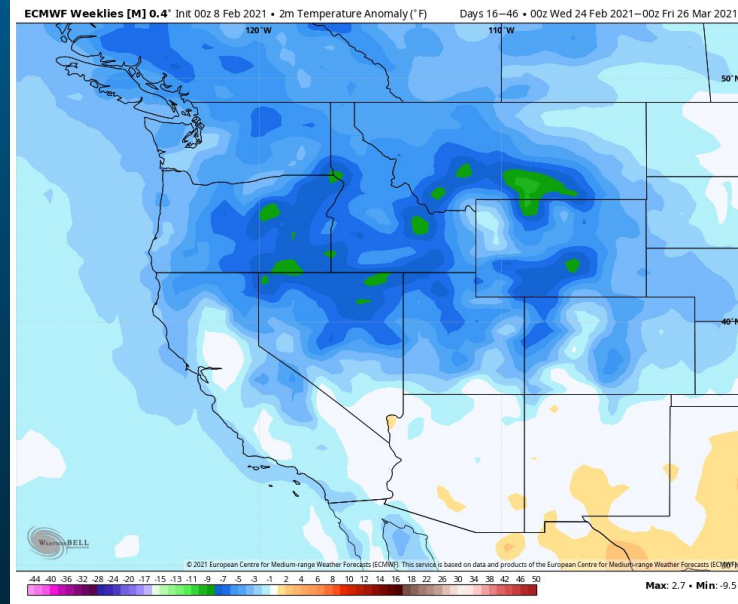
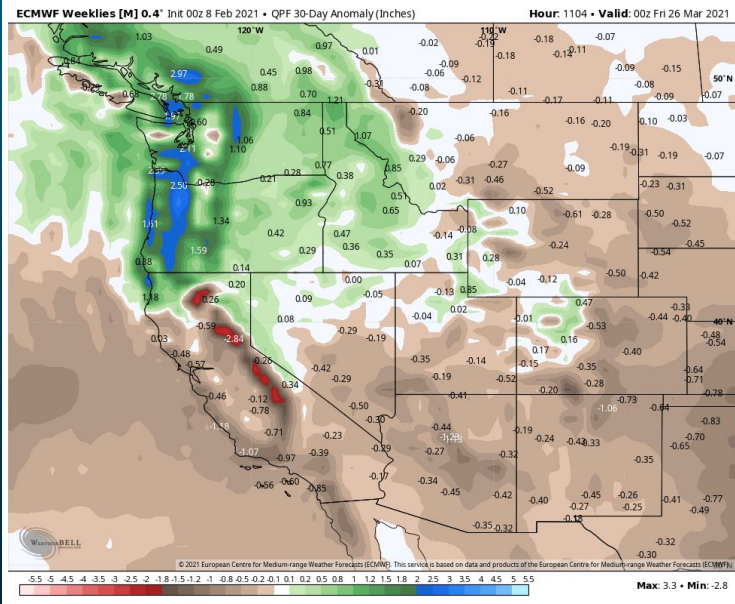
Precipitation

Temperature

*Lower Confidence
Precip Forecasts*

*Suggests Fewer
Big ARs but more
showery.*

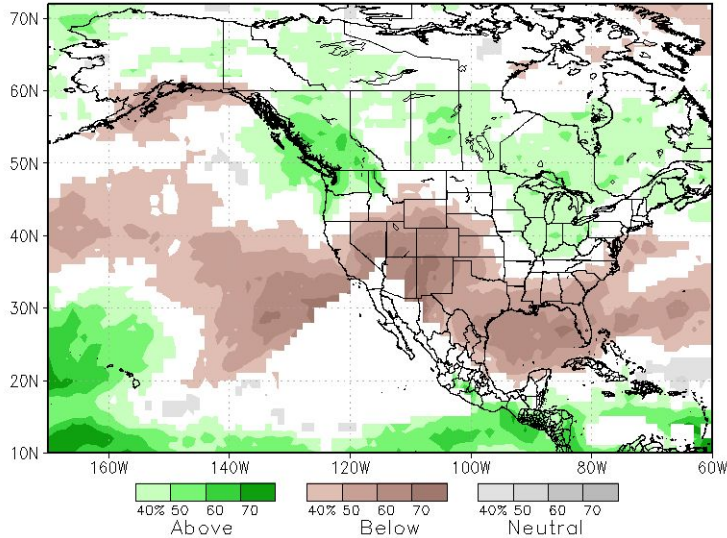
*Temperature
outlook favors
cooler, especially
over N. Nevada*



March-May Precipitation and Temperature Outlook

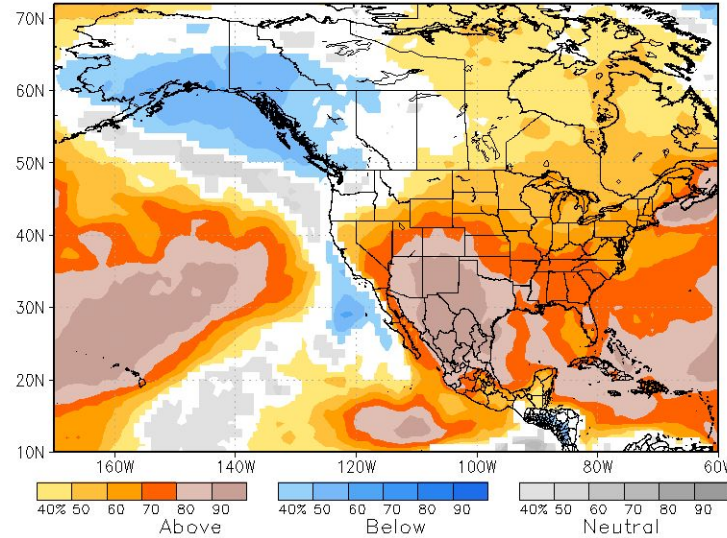
Precipitation

NMME prob fcst Prate IC=202102 for lead 1 2021 MAM



Temperature

NMME prob fcst TMP2m IC=202102 for lead 1 2021 MAM

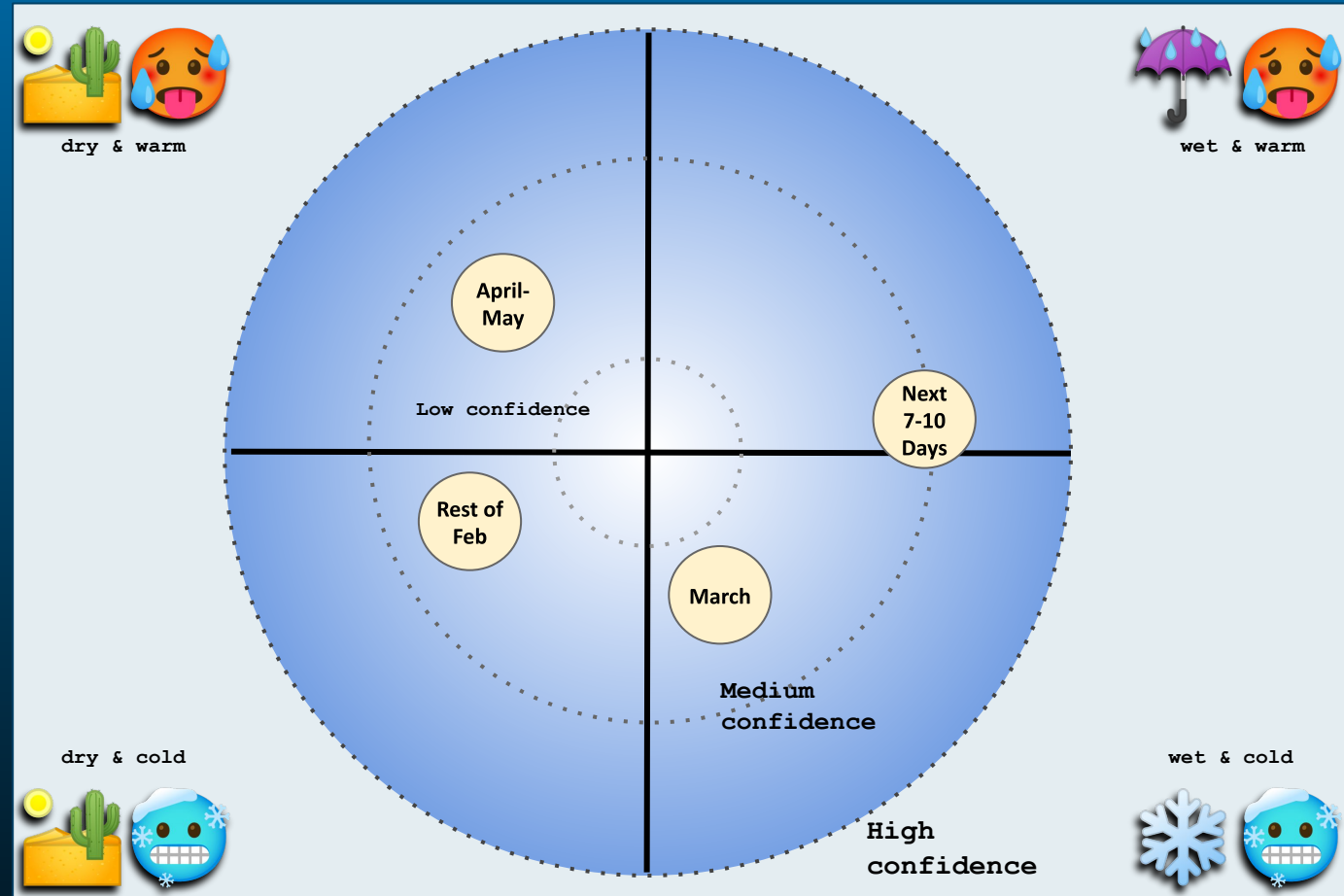


Significant model spread

Some models indicate potential for cool/wet March.

Warm and Dry favored for April and May.

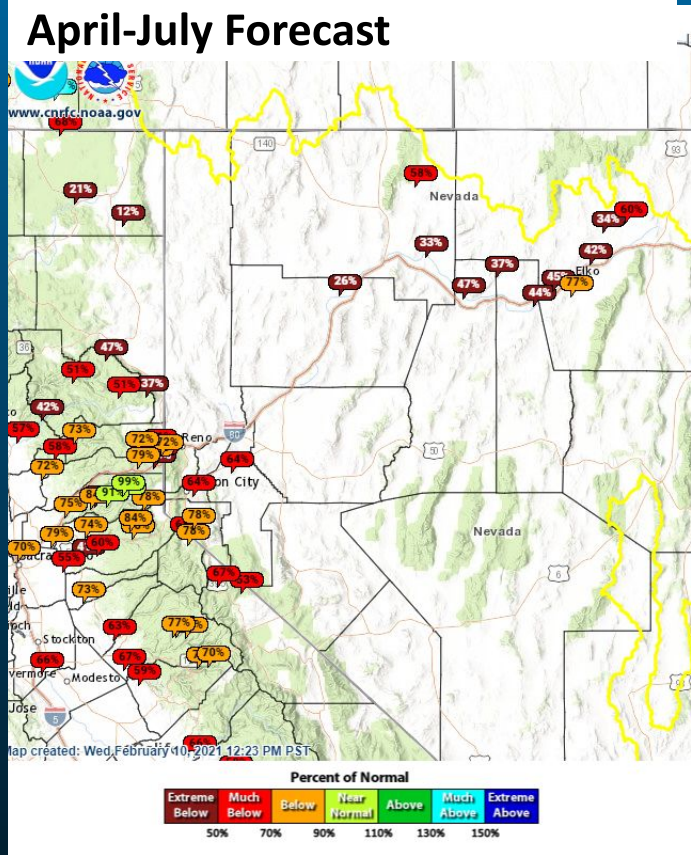
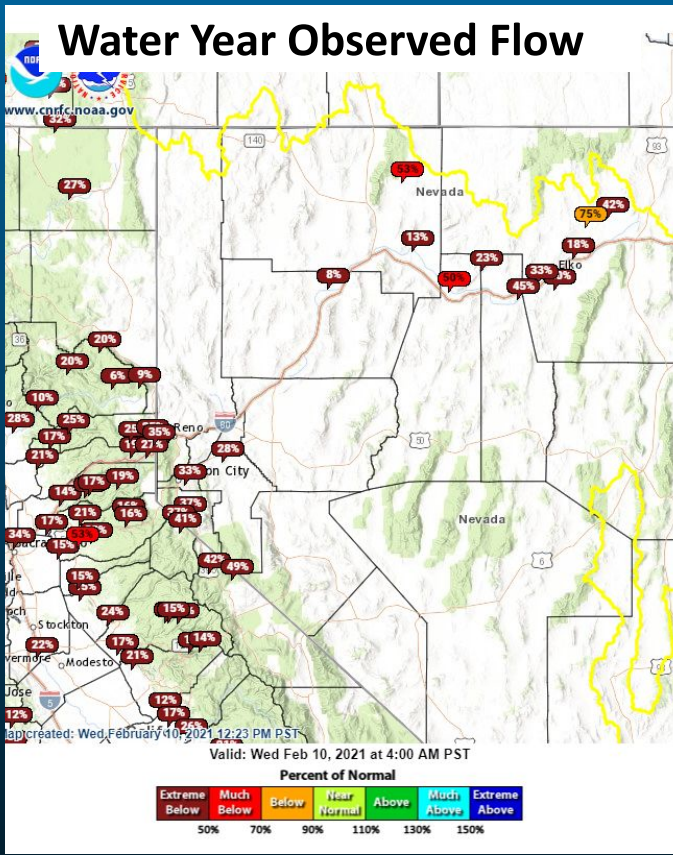
Weather Outlook in Chris' Attention Span Format



Key Points

- Confidence medium at best.
- Active pattern next 7-10 days with mainly moderate Sierra storms. Some warm, some cooler.
- High pressure ridge builds back for end of month, leaning toward drier days.
- March showing cool, showery pattern in latest sub-seasonal simulations.
- Balance of spring leaning warmer, drier than normal.

Observed Flow and Water Supply Forecasts



Low Observed flows reflect lack of carryover and hot dry fall.

Low forecast based on existing snow, dry soils, and weather outlook.





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Reno National Weather Service
Forecasting for the Sierra and western Nevada since 1905

