

# Climate Center Update

Colorado Water  
Conditions Monitoring  
Committee 2/25/2025

Peter Goble  
Colorado Climate  
Center

Photo Credit: Noah  
Newman



COLORADO  
**CLIMATE**  
CENTER



**ATMOSPHERIC SCIENCE**  
COLORADO STATE UNIVERSITY

# Agenda

- Current seasonal climate conditions update
- Notable events
- Drought update
- Seasonal Forecast info (How is spring shaping up?)



# Colorado statewide average temperature and precipitation, January

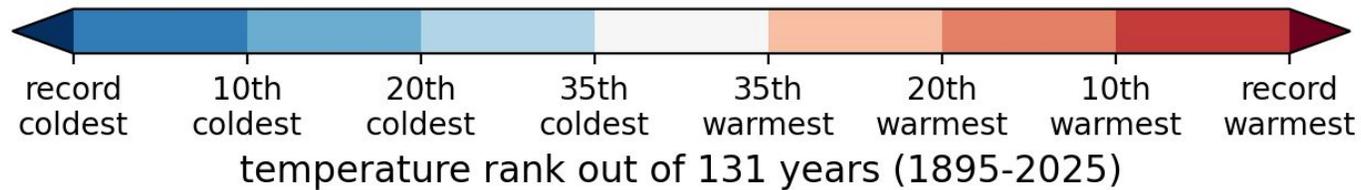
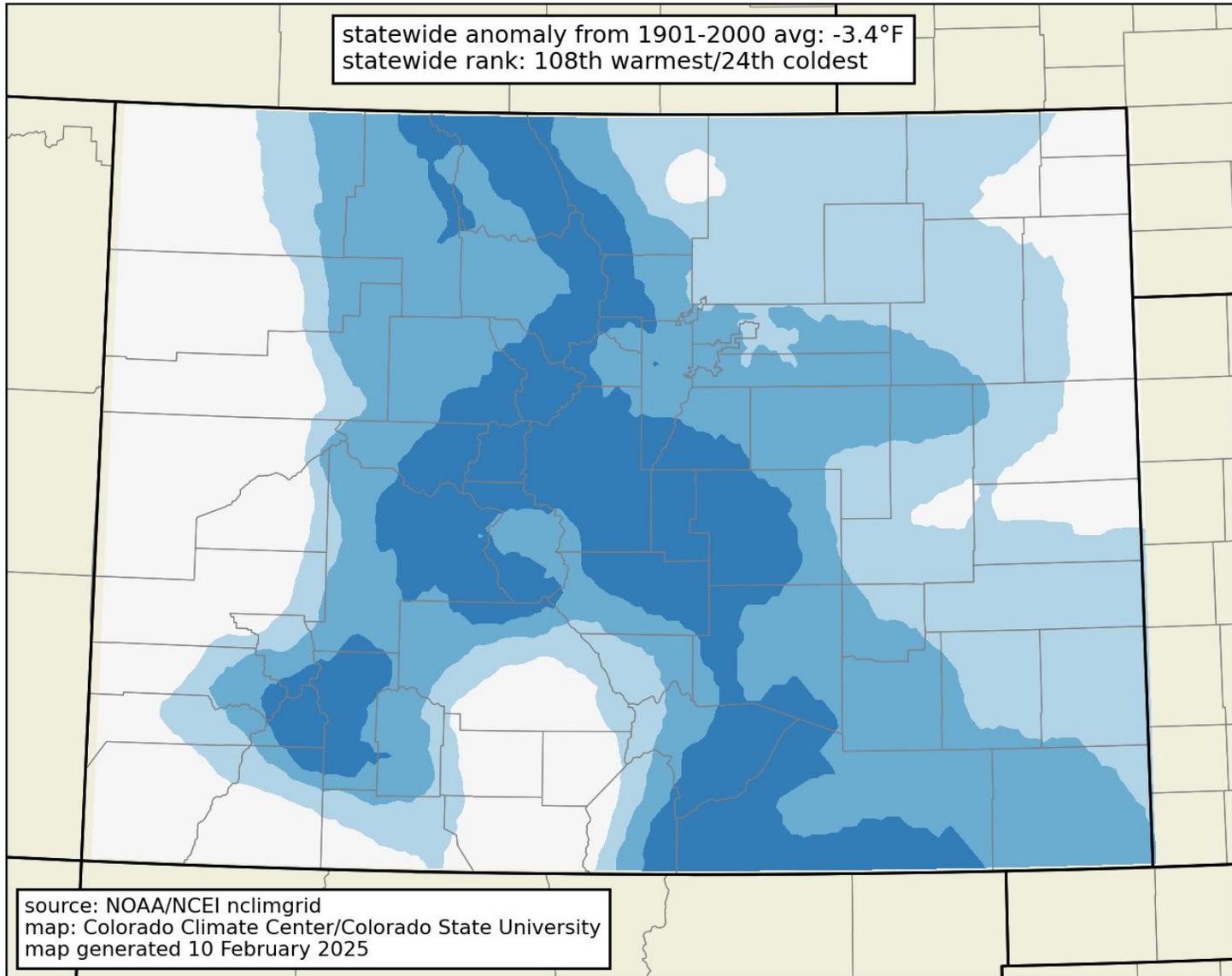


6.0 °F below  
1991-2020  
normal

0.35" below  
1991-2020  
normal

[https://climate.colostate.edu/co\\_cag/quadrant.html](https://climate.colostate.edu/co_cag/quadrant.html)

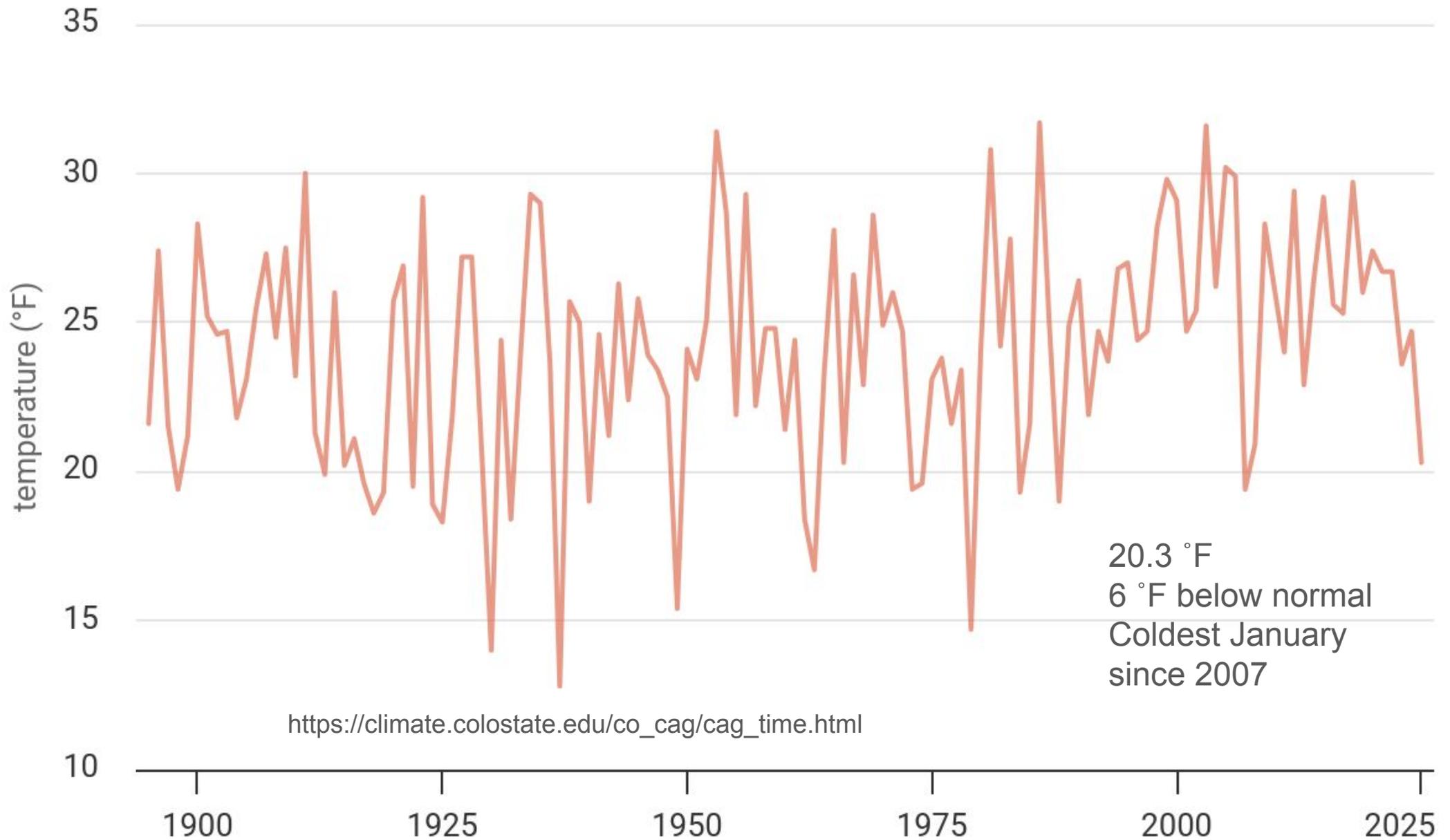
# average temperature rank: January 2025



[https://climate.colostate.edu/co\\_cag/rank\\_maps.html](https://climate.colostate.edu/co_cag/rank_maps.html)

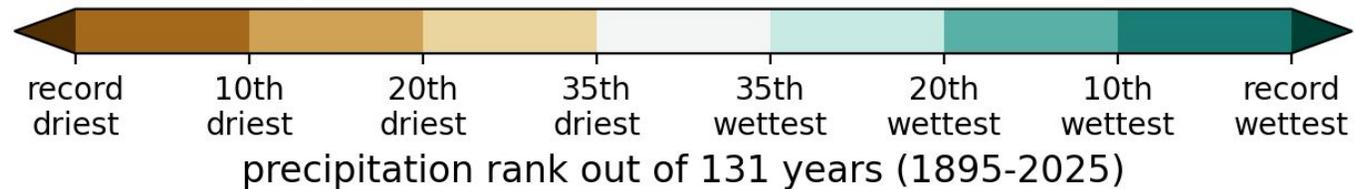
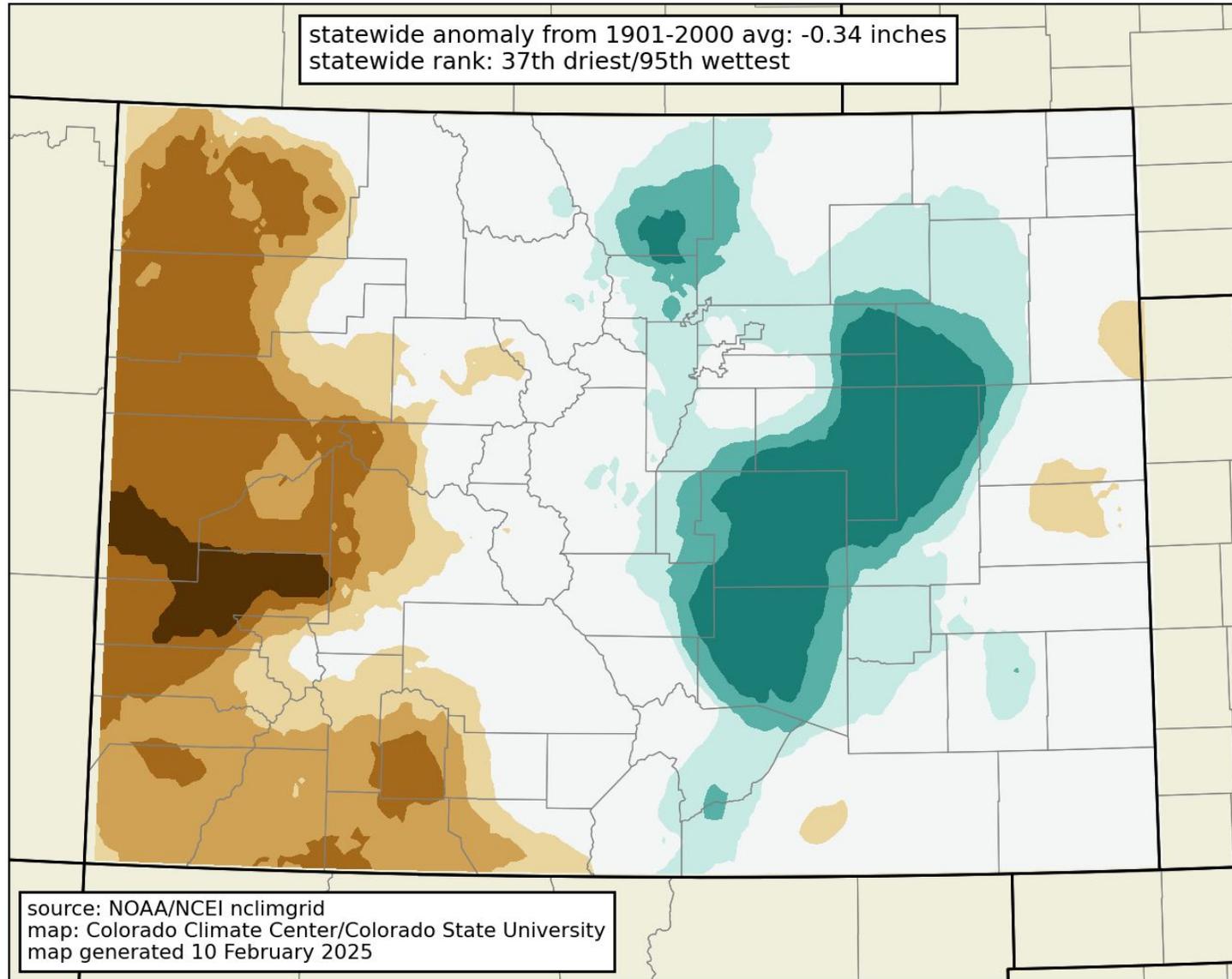


# Colorado January Average Temperature



# precipitation rank: January 2025

statewide anomaly from 1901-2000 avg: -0.34 inches  
statewide rank: 37th driest/95th wettest

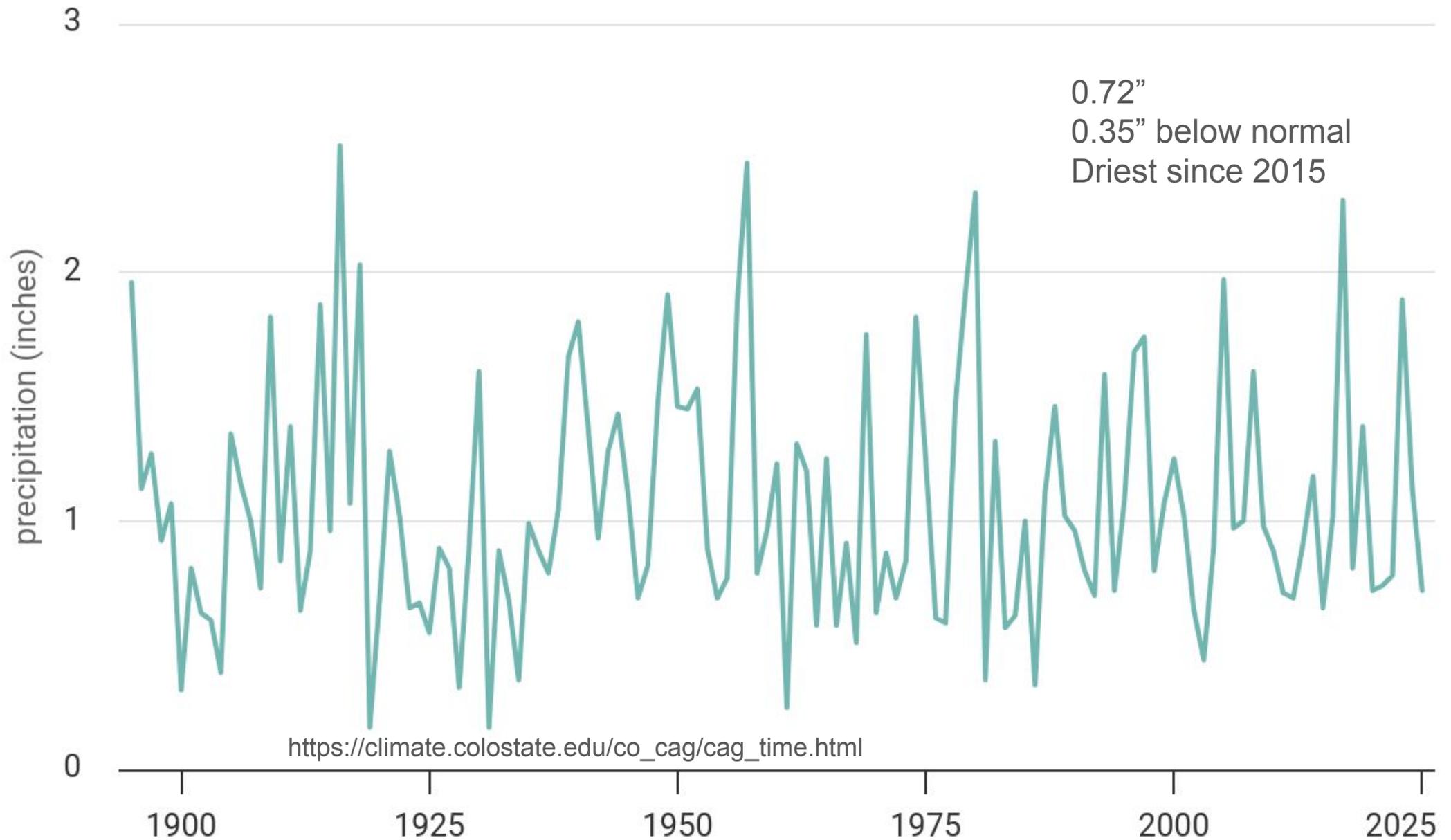


First time  
Montrose had no  
precip in January

Record since 1896

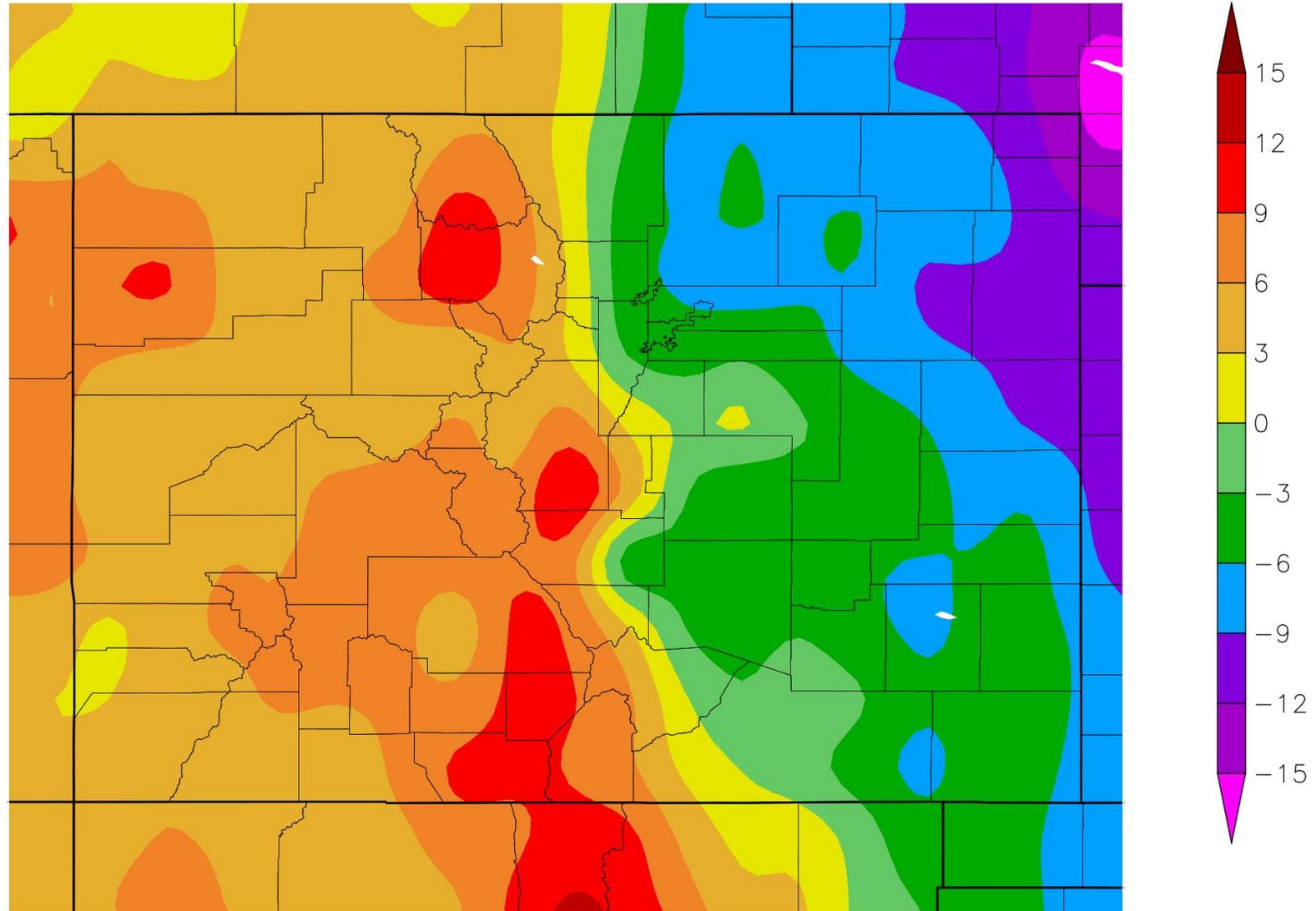
[https://climate.colostate.edu/co\\_cag/rank\\_maps.html](https://climate.colostate.edu/co_cag/rank_maps.html)

# Colorado January Precipitation



# Departure from Normal Temperature (F)

## 2/1/2025 – 2/21/2025

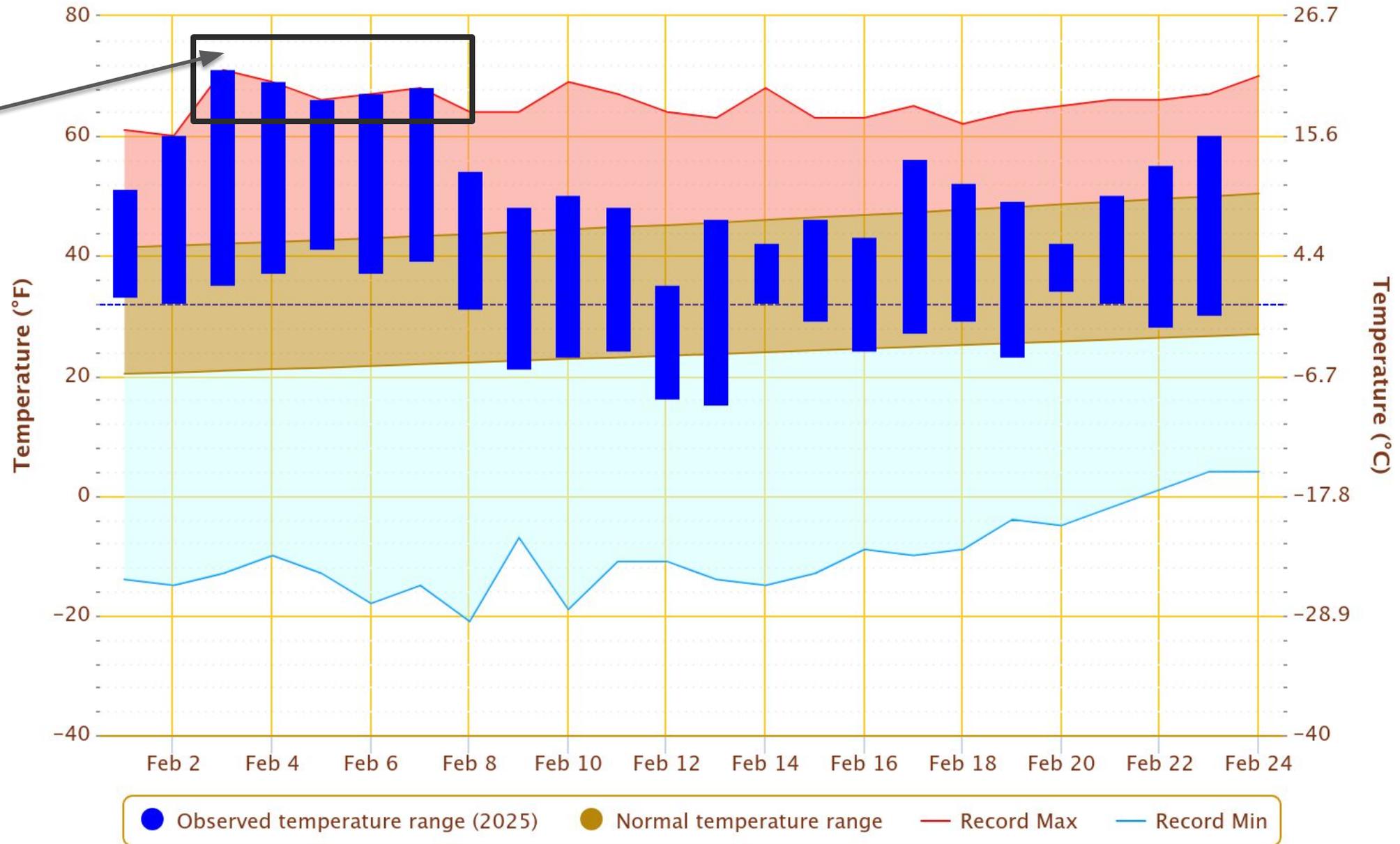


<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>

# Daily Temperature Data – GRAND JUNCTION WALKER FIELD, CO

Period of Record – 1900-01-01 to 2025-02-23. Normals period: 1991-2020. Click and drag to zoom chart.

Five straight days  
of record warmth





New Record Date (2025)	Location	New Record (°F) Red = new winter record	Previous Record (°F)	Year of Previous Record
Feb. 3	Alamosa-Bergman Field	67°	55°	2018
Feb. 3	Crestone 2SE	61°	51°	2000
Feb. 4	Winter Park	51°	38°	2004
Feb. 4	Palmer Lake	66°	56°	1993
Feb. 4	Ridgway	67°	57°	2000
Feb. 4	Grand Junction 6ESE	68°	58°	1995
Feb. 5	Grand Junction 6ESE	68°	56°	2015
Feb. 5	Colorado Natl. Monument	66°	55°	1995
Feb. 6	Walsh 1SW	77°	66°	2018

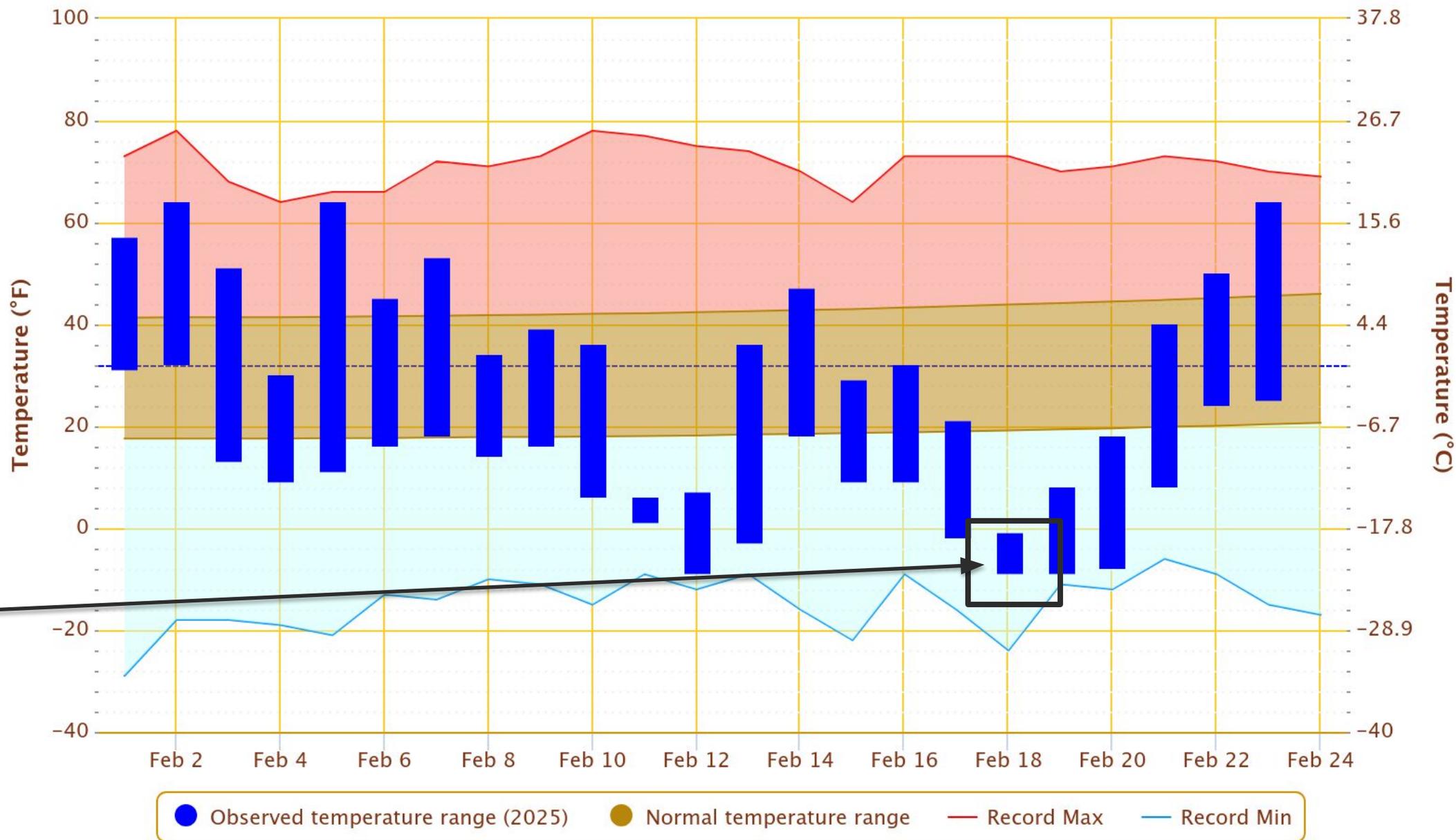
New maximum daily temperature records, set by 10°F or more, for various stations. Records that also set new winter records (December/January/February) are colored in red. Data source: ACIS.

<https://climate.colostate.edu/blog/index.php/2025/02/18/a-heatwave-in-winter-early-february-featured-record-breaking-warmth/>



# Daily Temperature Data – AKRON WASHINGTON COUNTY AP, CO

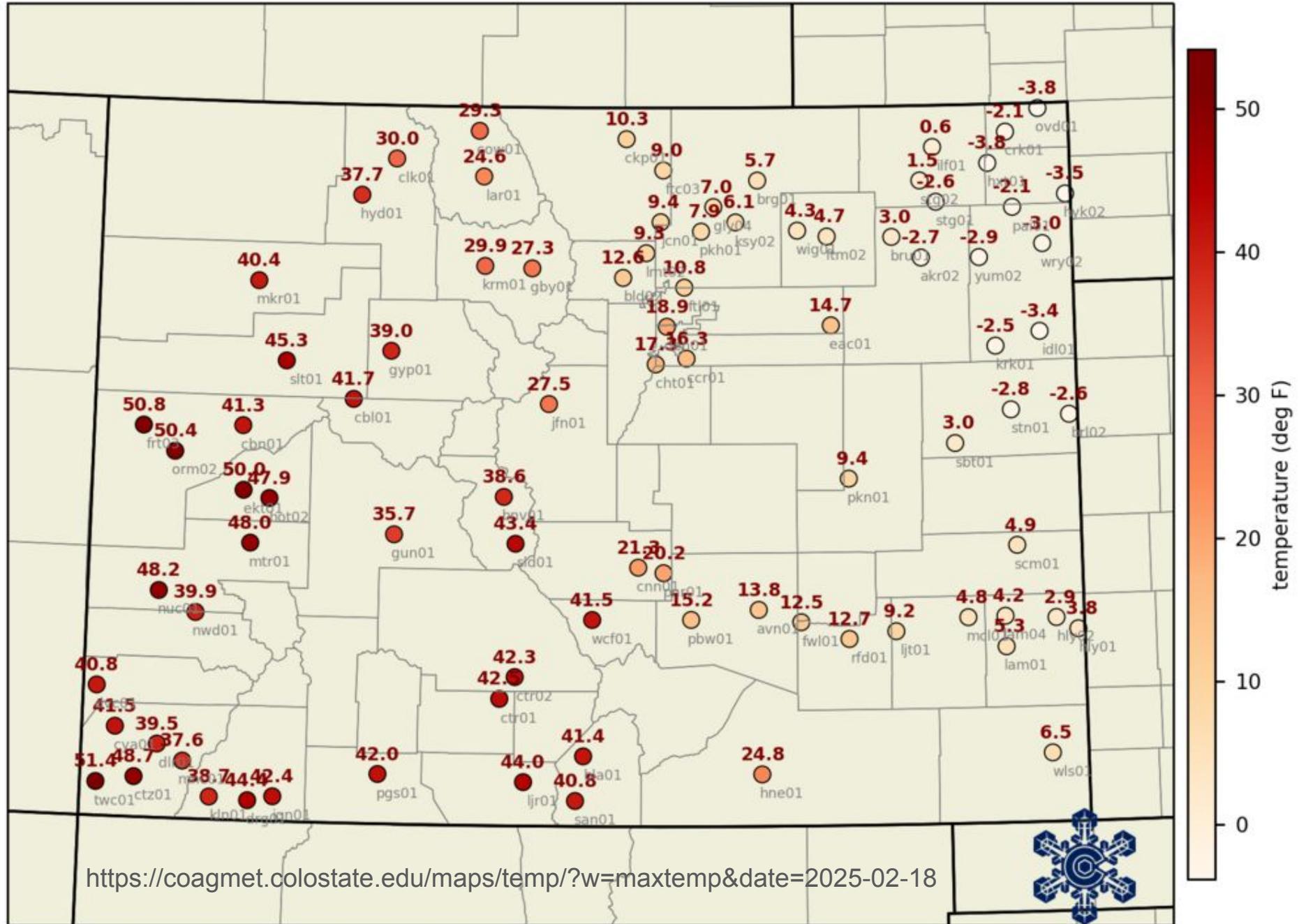
Period of Record – 1937-03-01 to 2025-02-23. Normals period: 1991-2020. Click and drag to zoom chart.



Tmax  
below zero

<https://scacis.rcc-acis.org/>

# CoAgMET/Northern Water daily maximum temperature (F): 18 Feb 2025



<https://coagmet.colostate.edu/maps/temp/?w=maxtemp&date=2025-02-18>

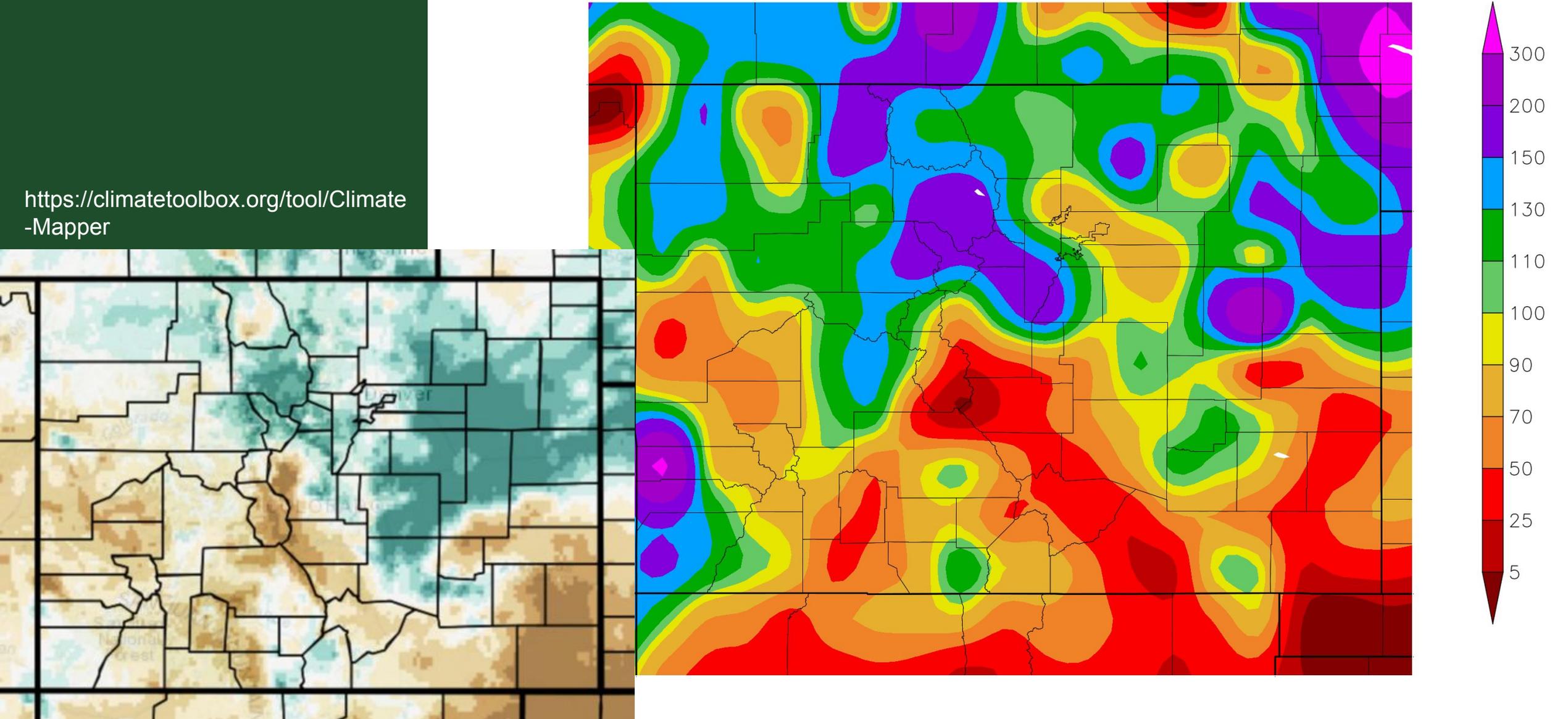


<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>

<https://climatetoolbox.org/tool/Climate-Mapper>

# Percent of Normal Precipitation (%)

## 2/1/2025 – 2/21/2025



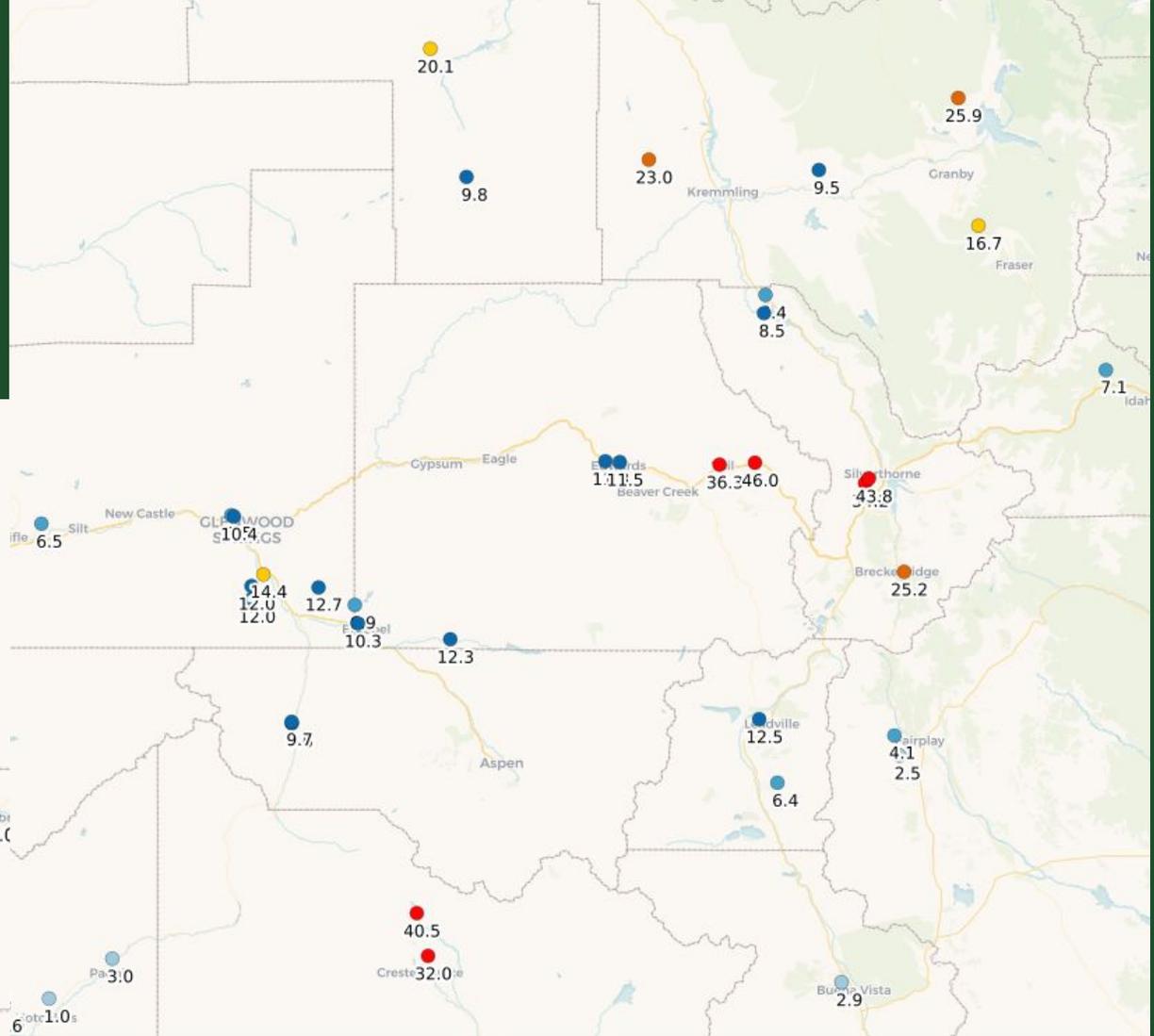
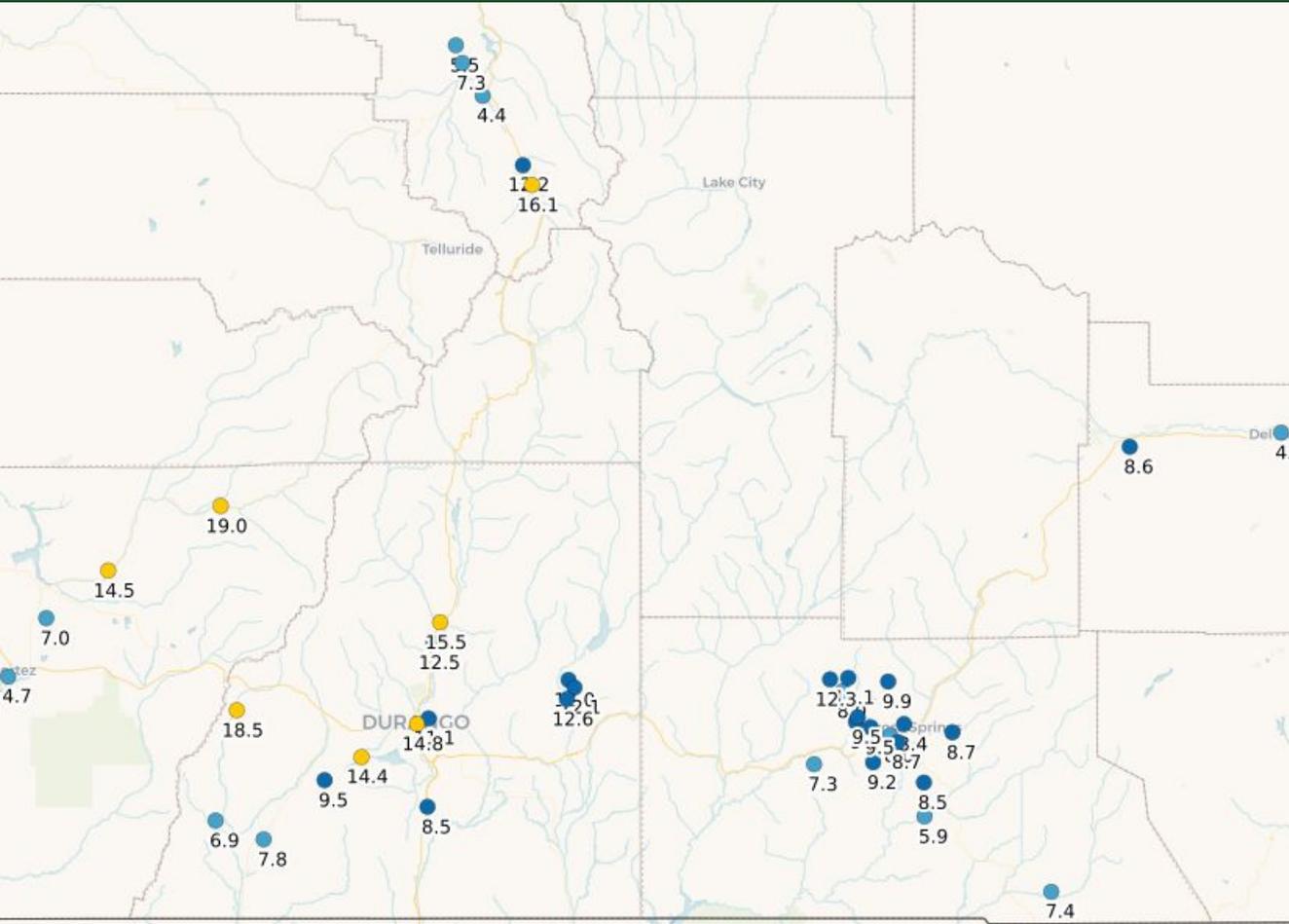
Generated 2/22/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

# Snow Events:

Major snow event 2/13-2/15 for San Juans with more snow in the northern Rockies over the next few days

2/13-2/19 accumulations of up to four feet in Summit County



NC CO

SW CO

<https://maps.cocorahs.org/>

## Snow Events:

Major snow event 2/13-2/15 for San Juans with more snow in the northern Rockies over the next few days

2/13-2/19 accumulations of up to four feet in Summit County

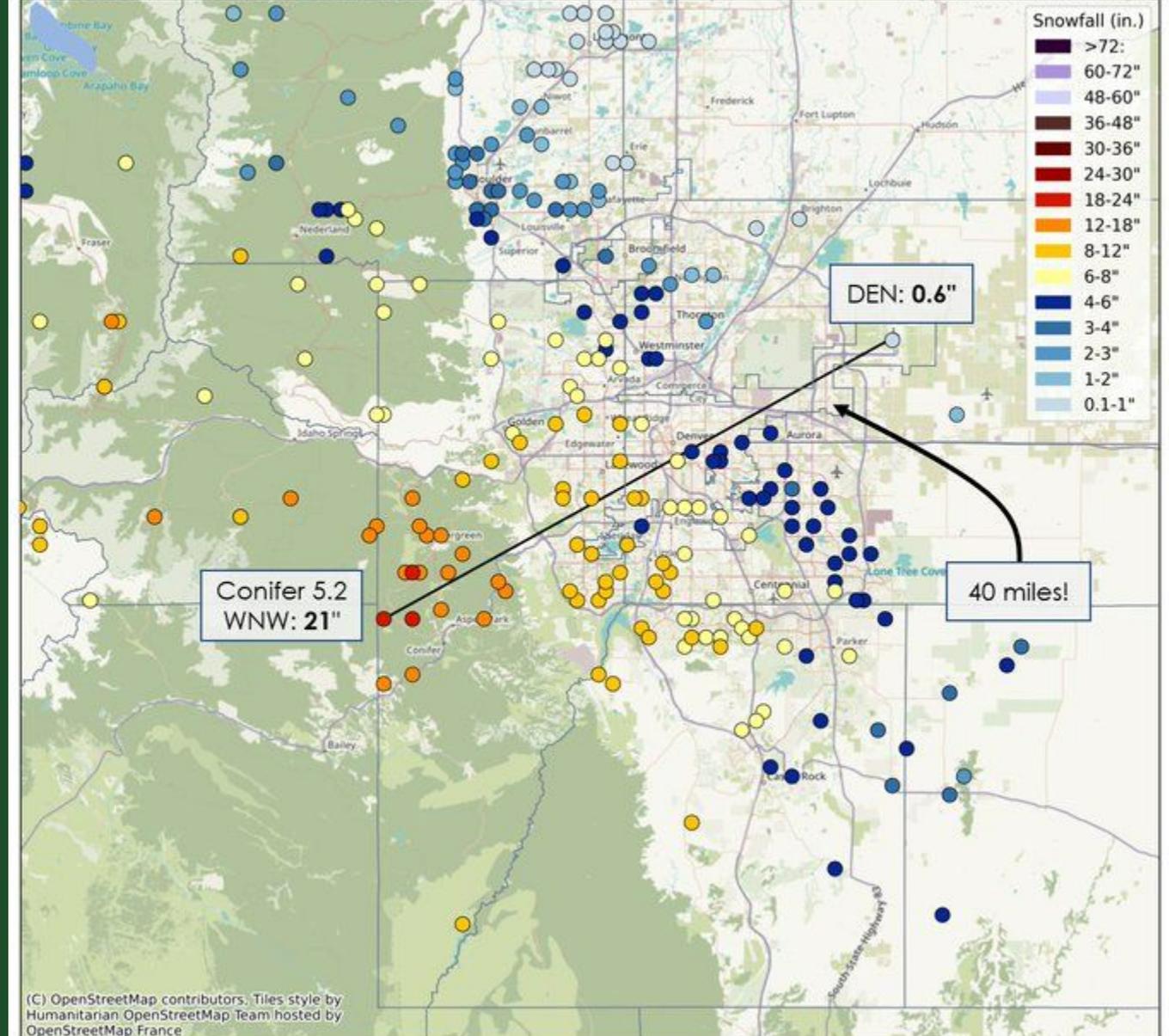
2/21/2025 metro area snowstorm

Snowfall gradient of 0.6" at DIA to 21" of snowfall in Conifer

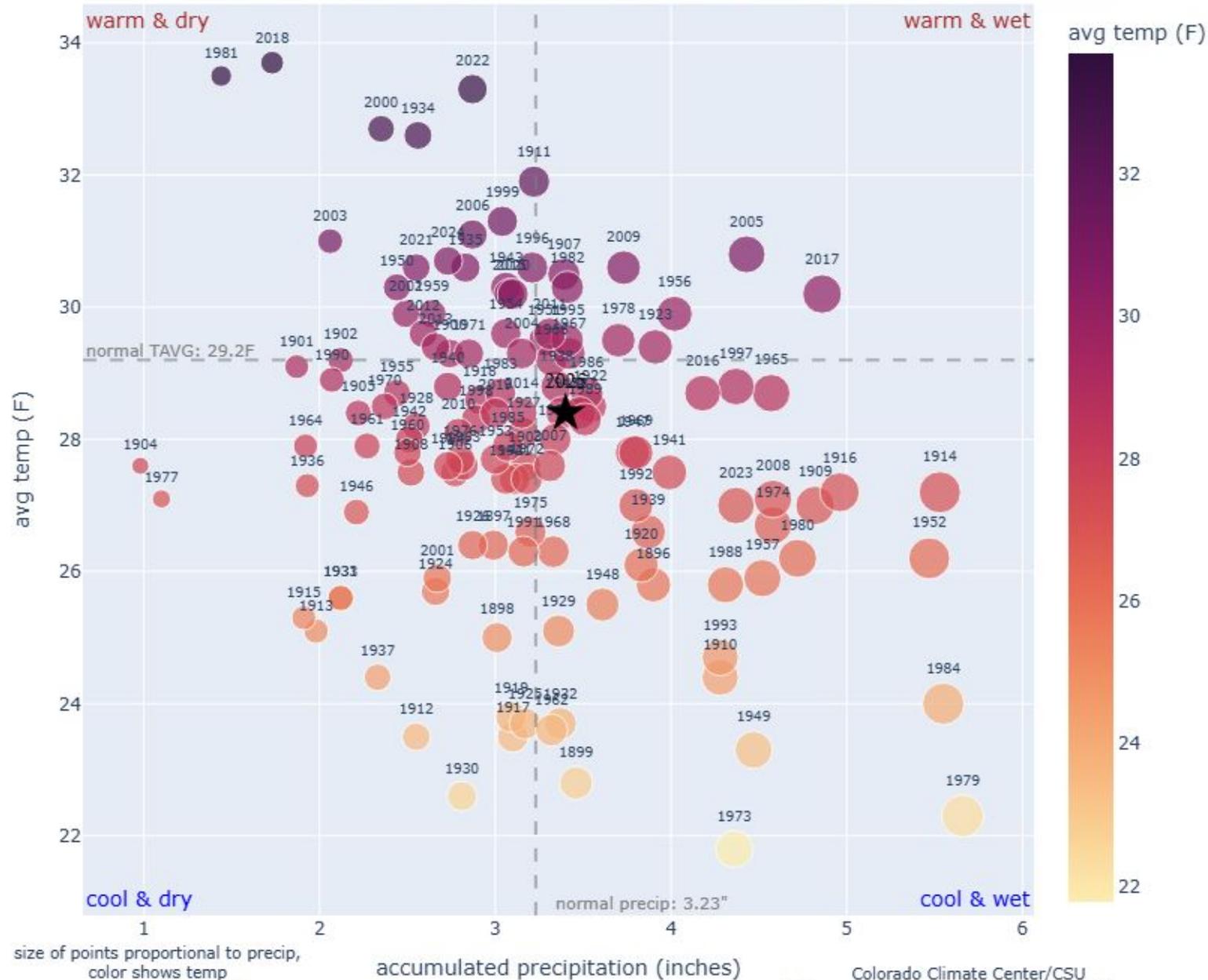
## Observed Snowfall Reports

LSR Source(s): CoCoRaHS, COOP, SNOTEL, Trained Spotters, & Public

Between 02/21/2025 10Z - 02/21/2025 16Z



# Colorado statewide average temperature and precipitation, November - January



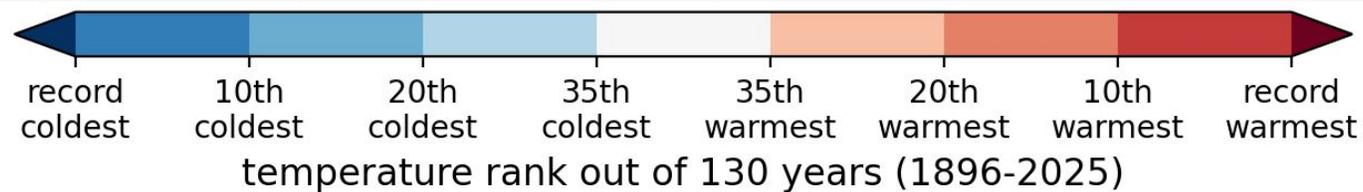
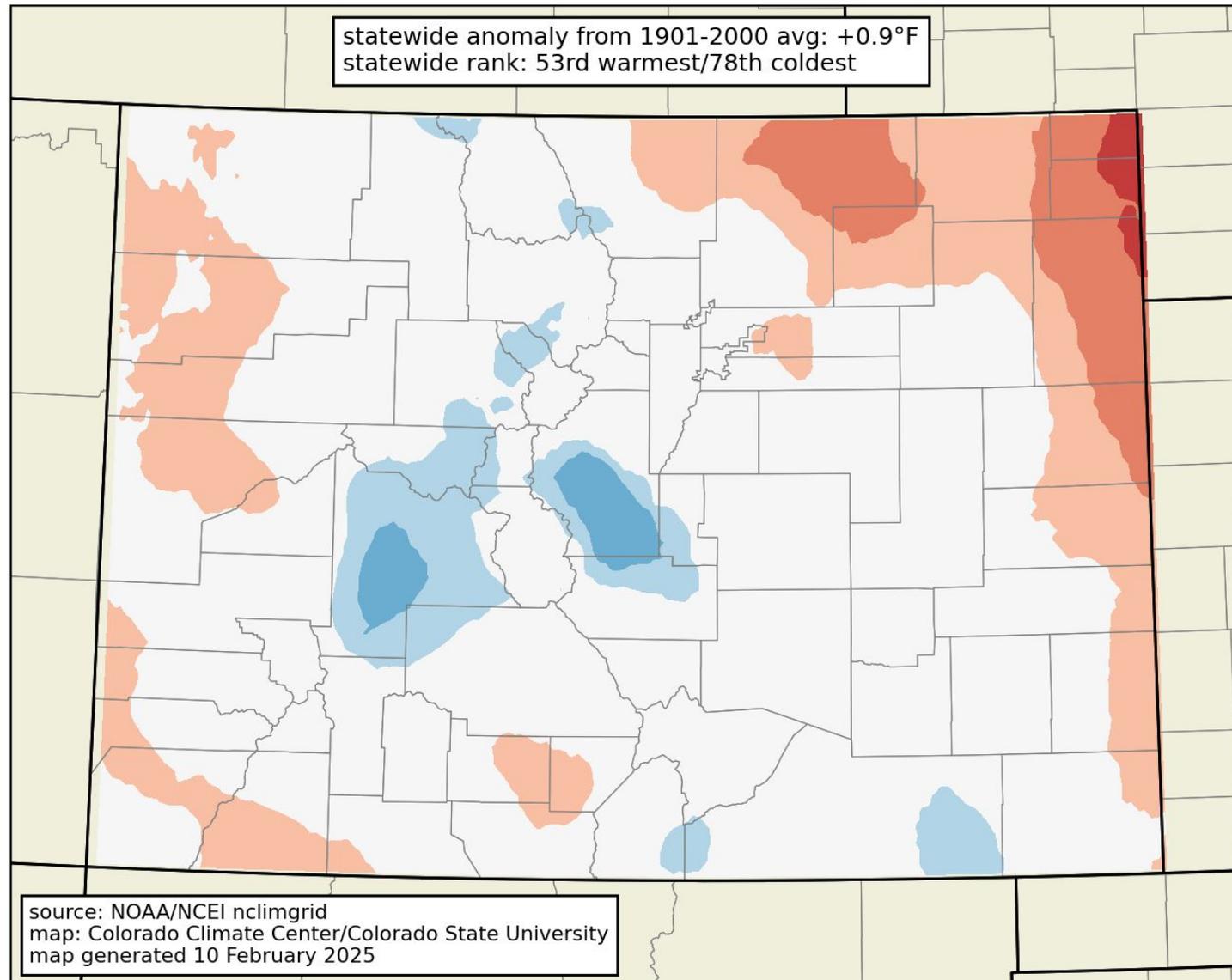
0.8 °F below  
1991-2020  
normal

0.17" above  
1991-2020  
normal

[https://climate.colostate.edu/co\\_cag/quadrant.html](https://climate.colostate.edu/co_cag/quadrant.html)

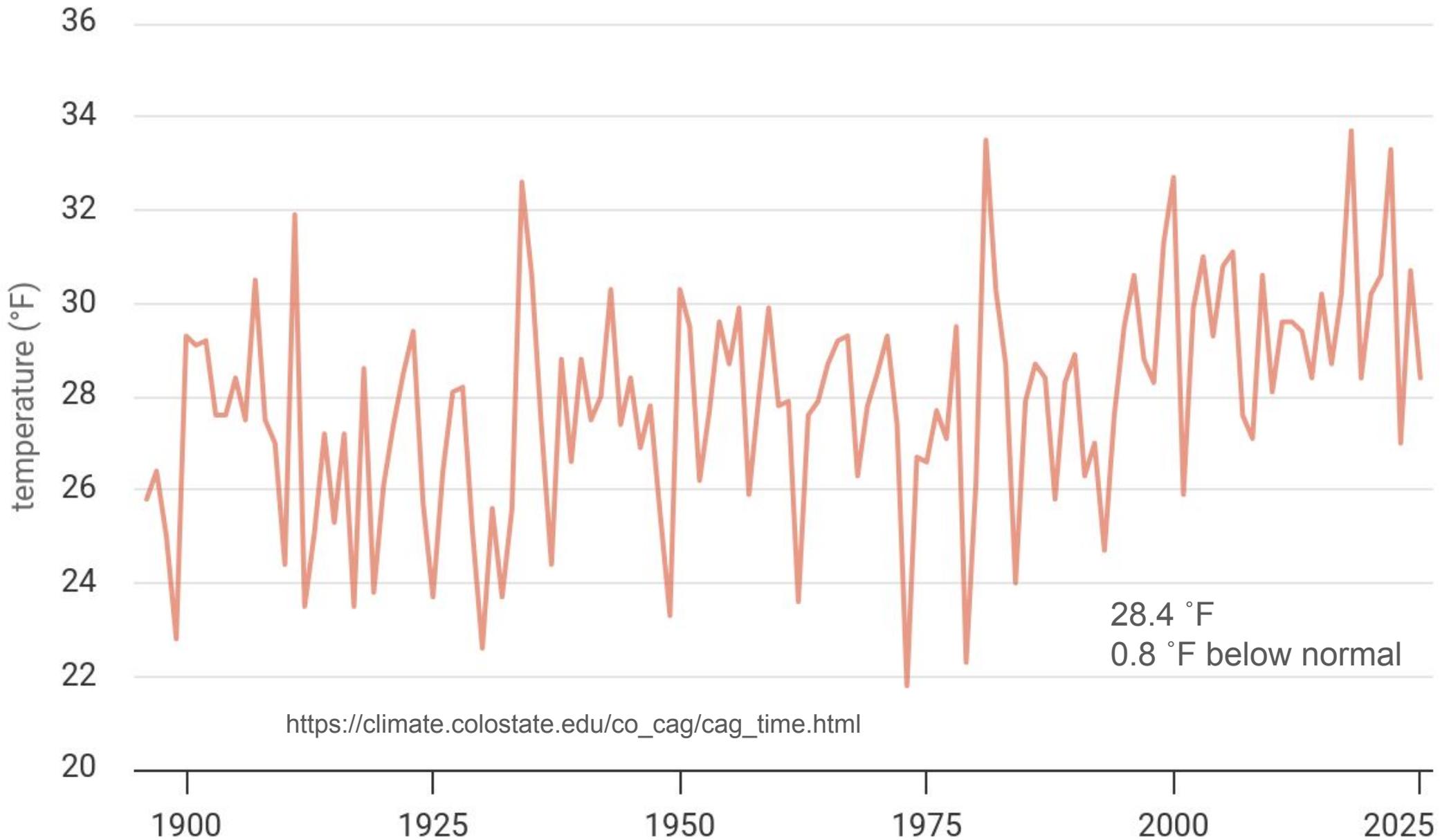


# average temperature rank: 3 months ending January 2025 (Nov-Jan)



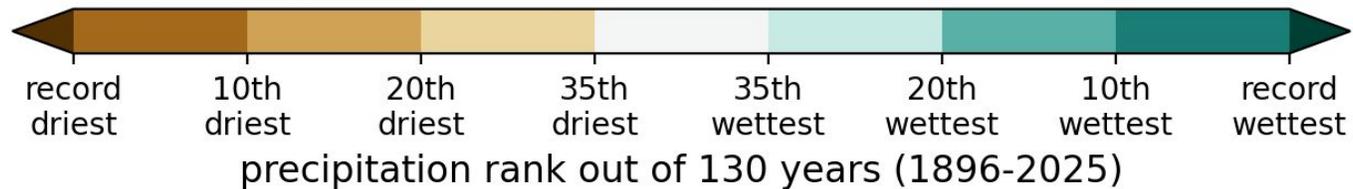
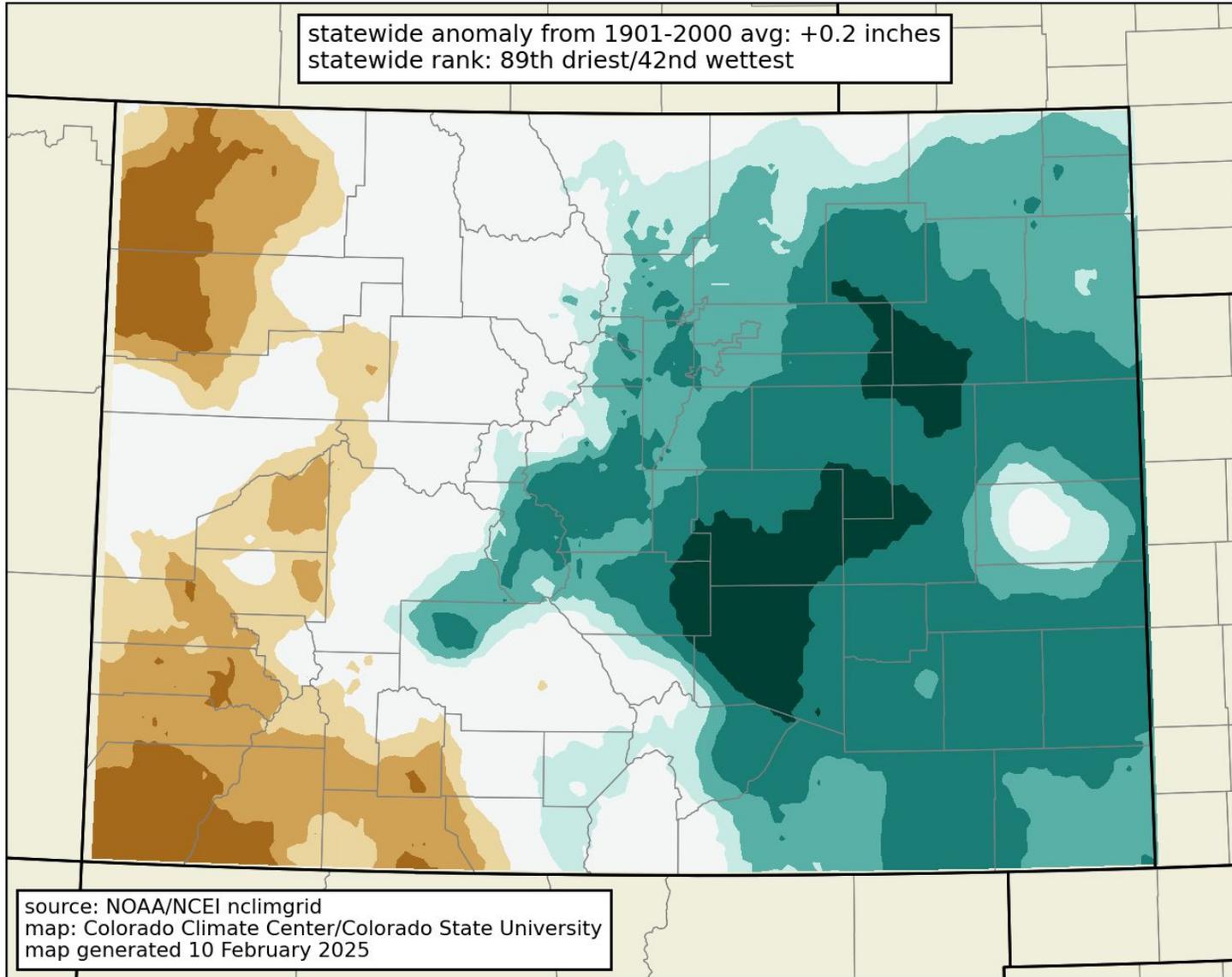
[https://climate.colostate.edu/co\\_cag/rank\\_maps.html](https://climate.colostate.edu/co_cag/rank_maps.html)

# Colorado November-January Average Temperature



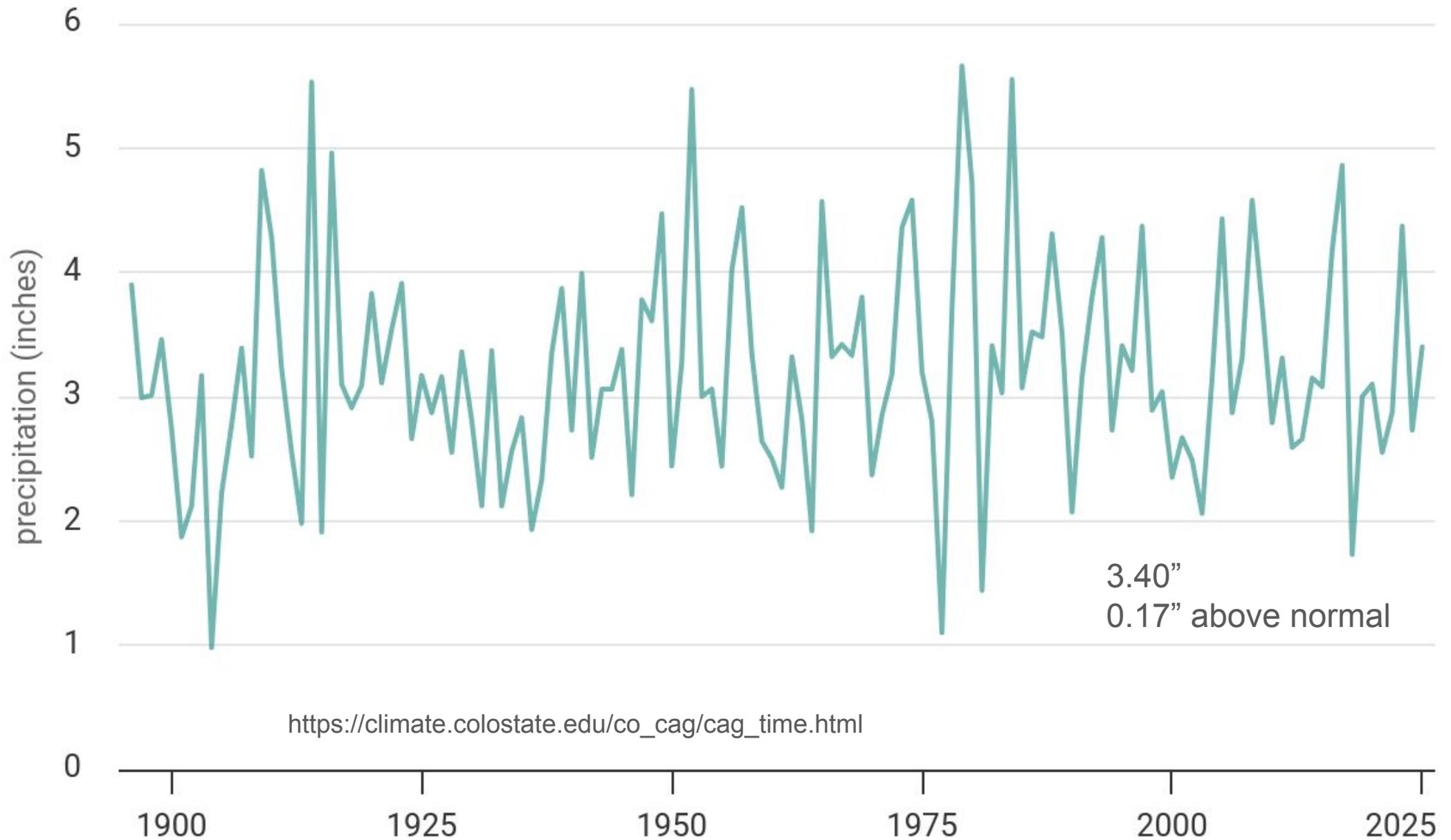
# precipitation rank: 3 months ending January 2025 (Nov-Jan)

statewide anomaly from 1901-2000 avg: +0.2 inches  
statewide rank: 89th driest/42nd wettest



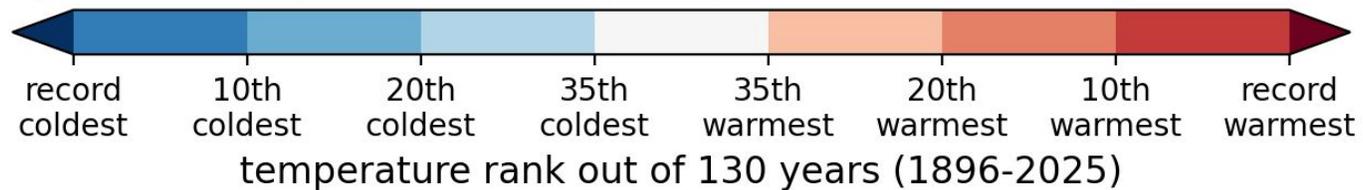
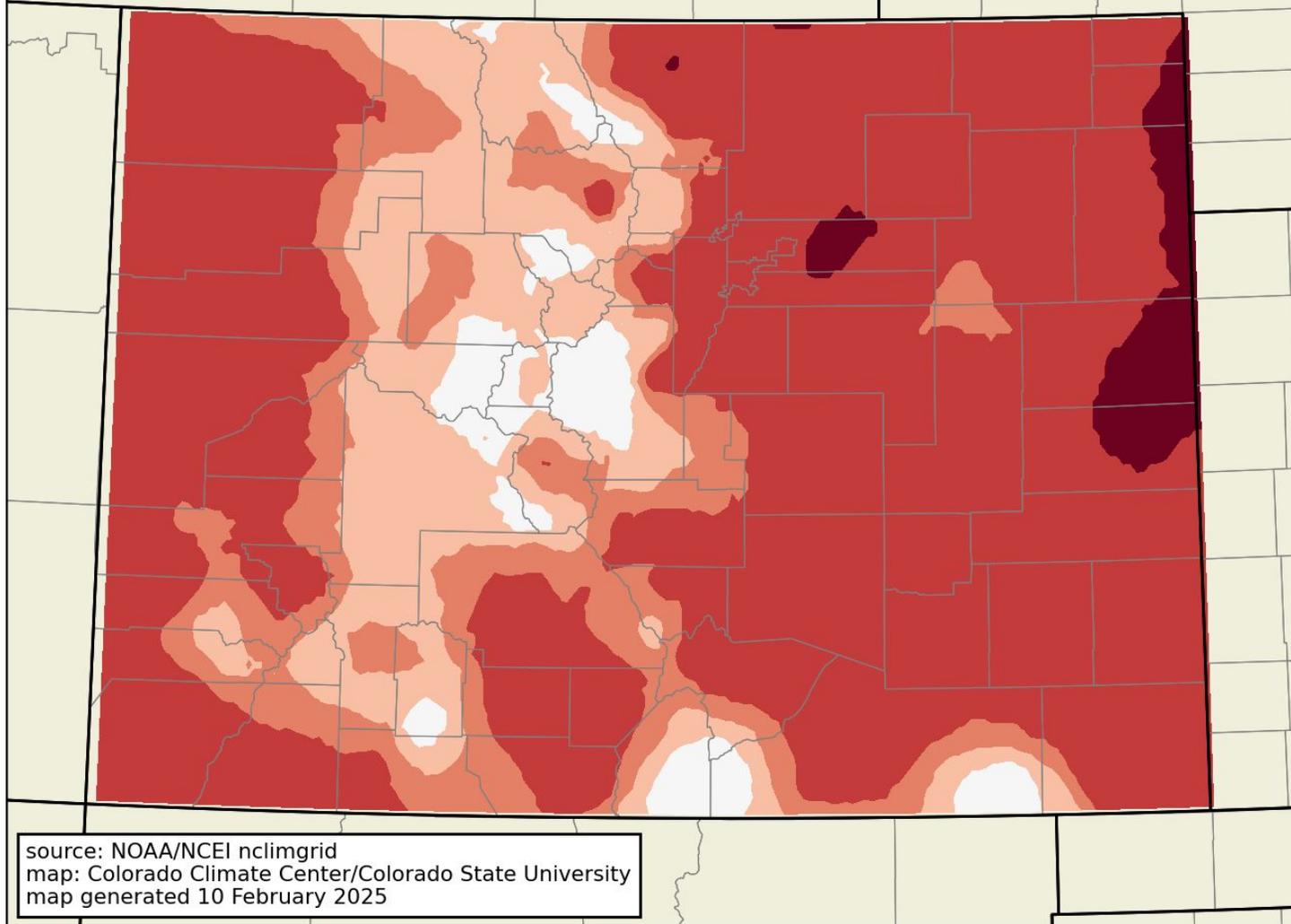
[https://climate.colostate.edu/co\\_cag/rank\\_maps.html](https://climate.colostate.edu/co_cag/rank_maps.html)

# Colorado November-January Precipitation



# average temperature rank: 12 months ending January 2025 (Feb-Jan)

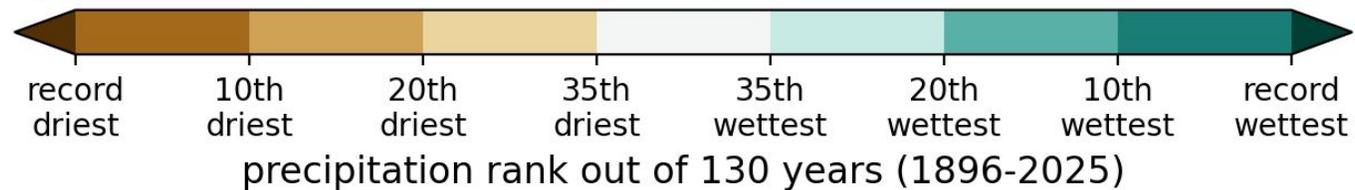
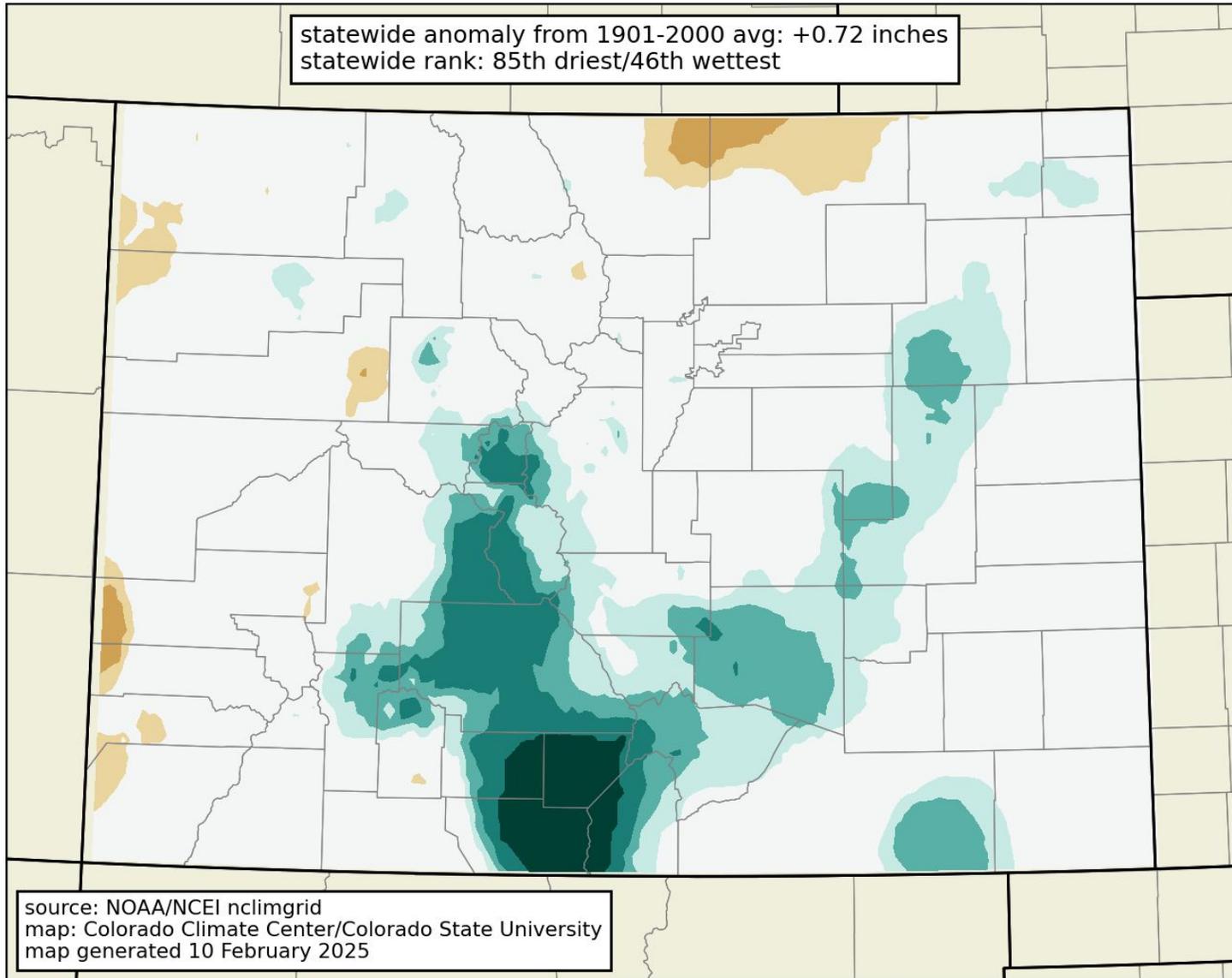
statewide anomaly from 1901-2000 avg: +2.7°F  
statewide rank: 5th warmest/126th coldest



[https://climate.colostate.edu/co\\_cag/rank\\_maps.html](https://climate.colostate.edu/co_cag/rank_maps.html)

# precipitation rank: 12 months ending January 2025 (Feb-Jan)

statewide anomaly from 1901-2000 avg: +0.72 inches  
statewide rank: 85th driest/46th wettest



[https://climate.colostate.edu/co\\_cag/rank\\_maps.html](https://climate.colostate.edu/co_cag/rank_maps.html)

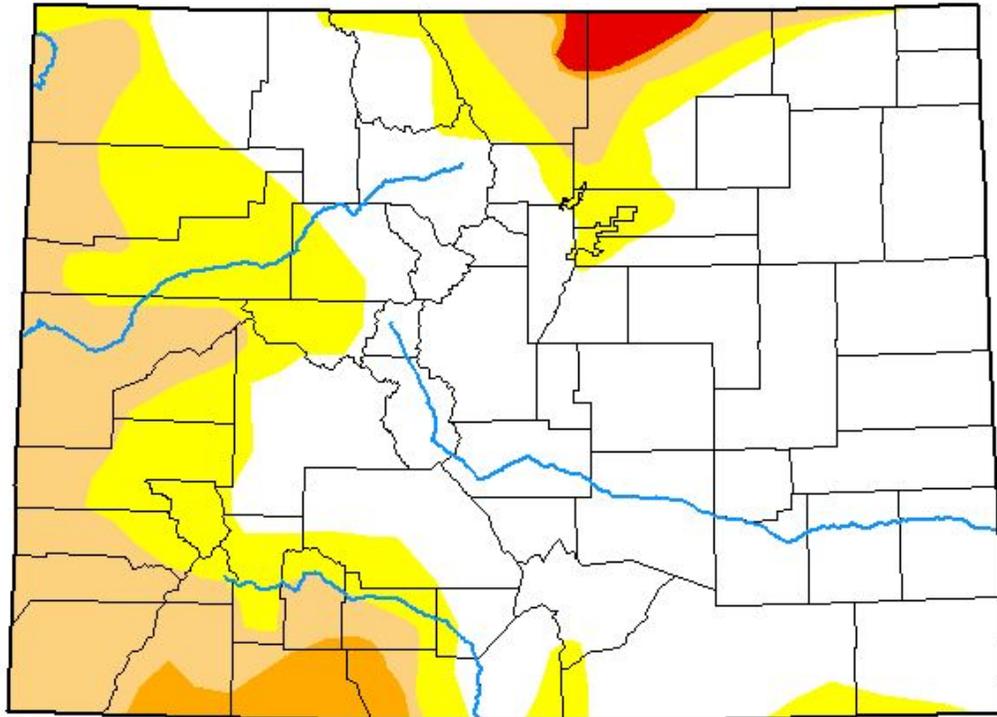
# Drought Update

- Drought development in western Colorado and amelioration in eastern Colorado
- Better than normal top meter soil moisture for most of the state
- Some areas of below normal terrestrial water storage scattered across the state



# U.S. Drought Monitor Colorado

**February 18, 2025**  
(Released Thursday, Feb. 20, 2025)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	61.40	38.60	19.89	3.20	0.85	0.00
<b>Last Week</b> <i>02-11-2025</i>	53.45	46.55	24.27	7.08	0.98	0.00
<b>3 Months Ago</b> <i>11-19-2024</i>	58.43	41.57	10.41	4.26	0.94	0.00
<b>Start of Calendar Year</b> <i>01-07-2025</i>	71.40	28.60	10.78	4.08	0.98	0.00
<b>Start of Water Year</b> <i>10-01-2024</i>	48.27	51.73	24.40	4.62	0.00	0.00
<b>One Year Ago</b> <i>02-20-2024</i>	63.34	36.66	10.68	3.52	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Brian Fuchs  
National Drought Mitigation Center

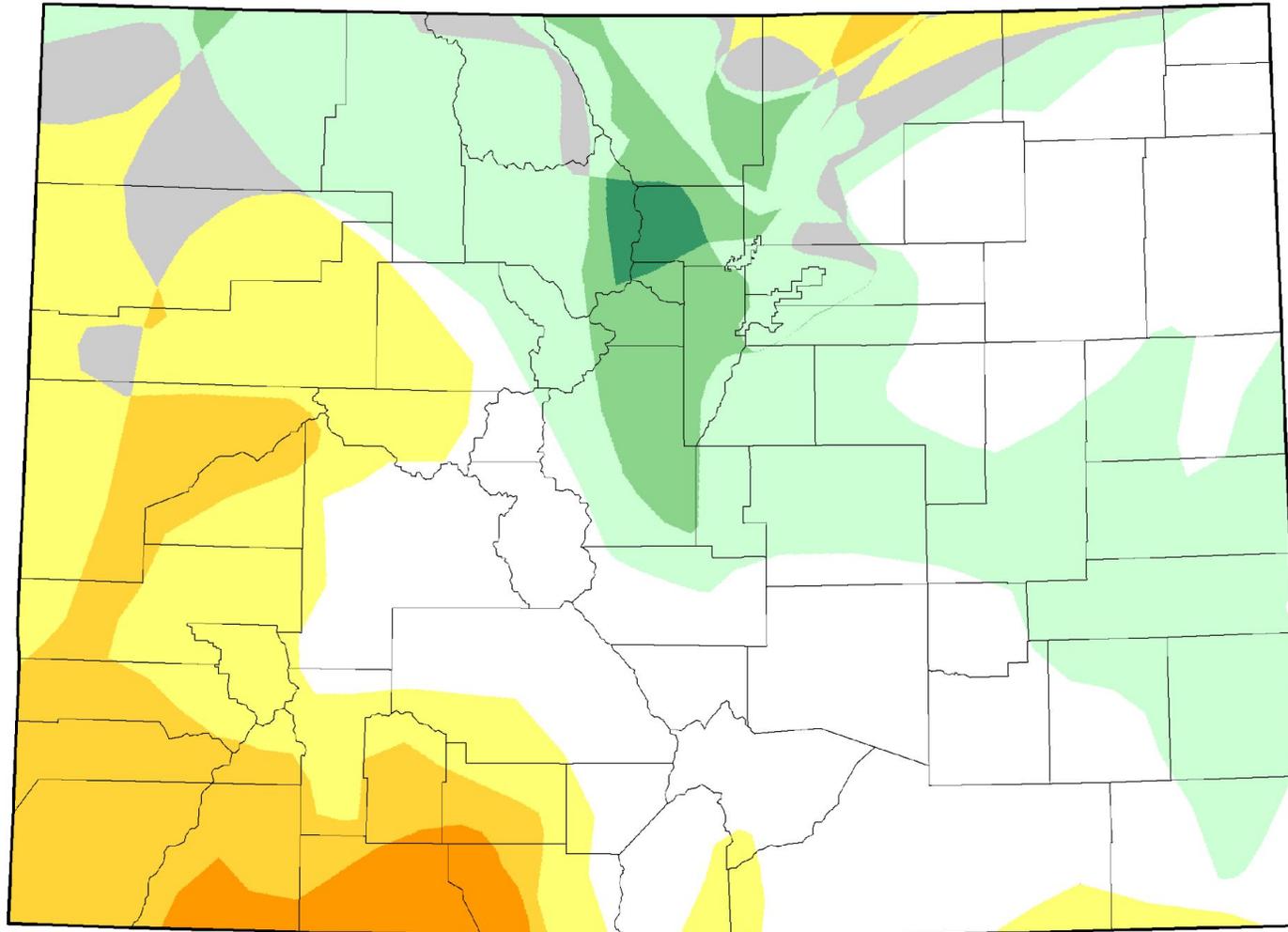
<https://droughtmonitor.unl.edu/>



**droughtmonitor.unl.edu**

# U.S. Drought Monitor Class Change - Colorado

## 12 Week



	5 Class Degradation
	4 Class Degradation
	3 Class Degradation
	2 Class Degradation
	1 Class Degradation
	No Change
	1 Class Improvement
	2 Class Improvement
	3 Class Improvement
	4 Class Improvement
	5 Class Improvement

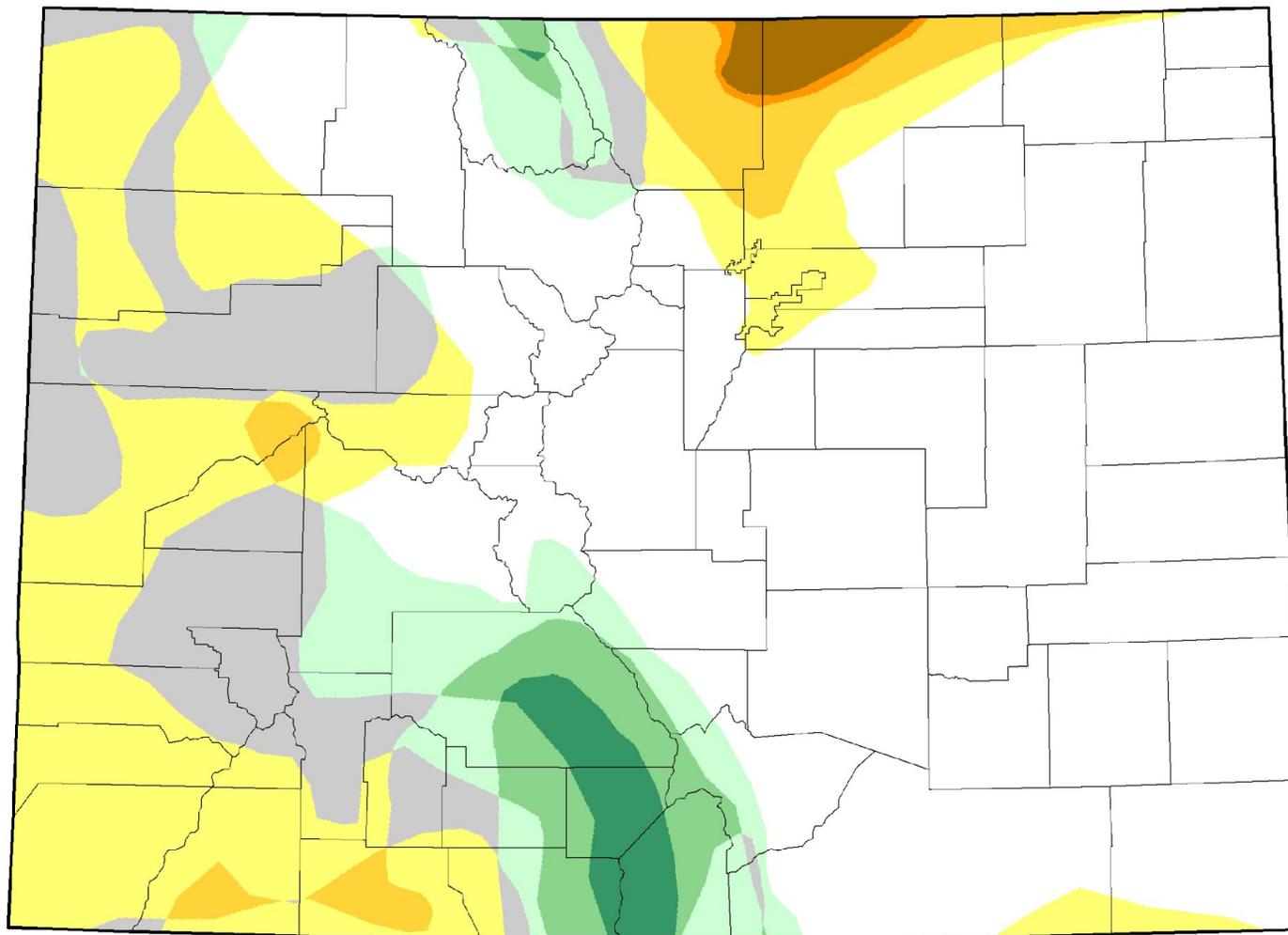
February 18, 2025  
compared to  
November 26, 2024

<https://droughtmonitor.unl.edu/>

[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

# U.S. Drought Monitor Class Change - Colorado

## 52 Week



-  5 Class Degradation
-  4 Class Degradation
-  3 Class Degradation
-  2 Class Degradation
-  1 Class Degradation
-  No Change
-  1 Class Improvement
-  2 Class Improvement
-  3 Class Improvement
-  4 Class Improvement
-  5 Class Improvement

February 18, 2025  
compared to  
February 20, 2024

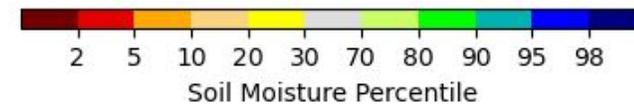
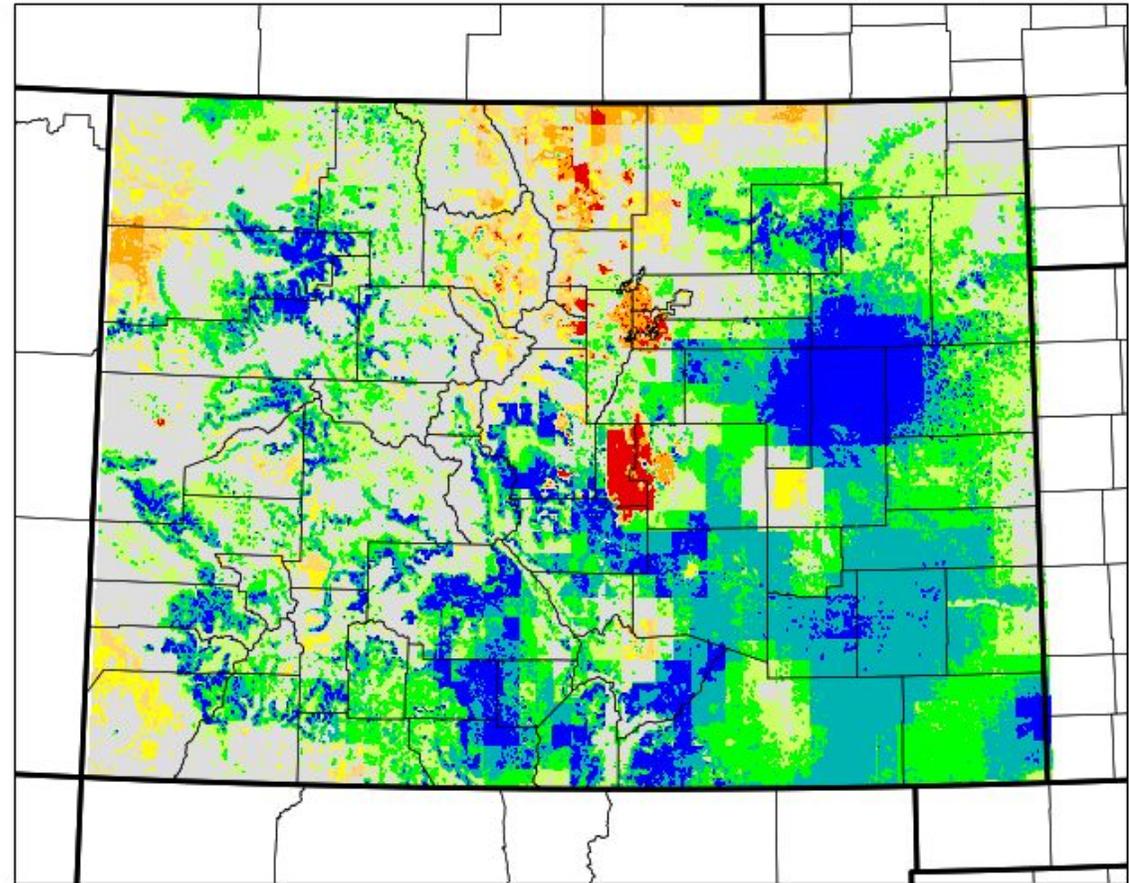
<https://droughtmonitor.unl.edu/>

[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

## Soil Moisture Percentiles (0-1m) 02/20/2025

Antecedent soil moisture conditions are above normal through much of western Colorado

Soil moisture at or near “record” highs (since mid-2000s) across much of the eastern plains after major November blizzard melted

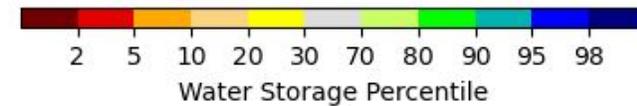
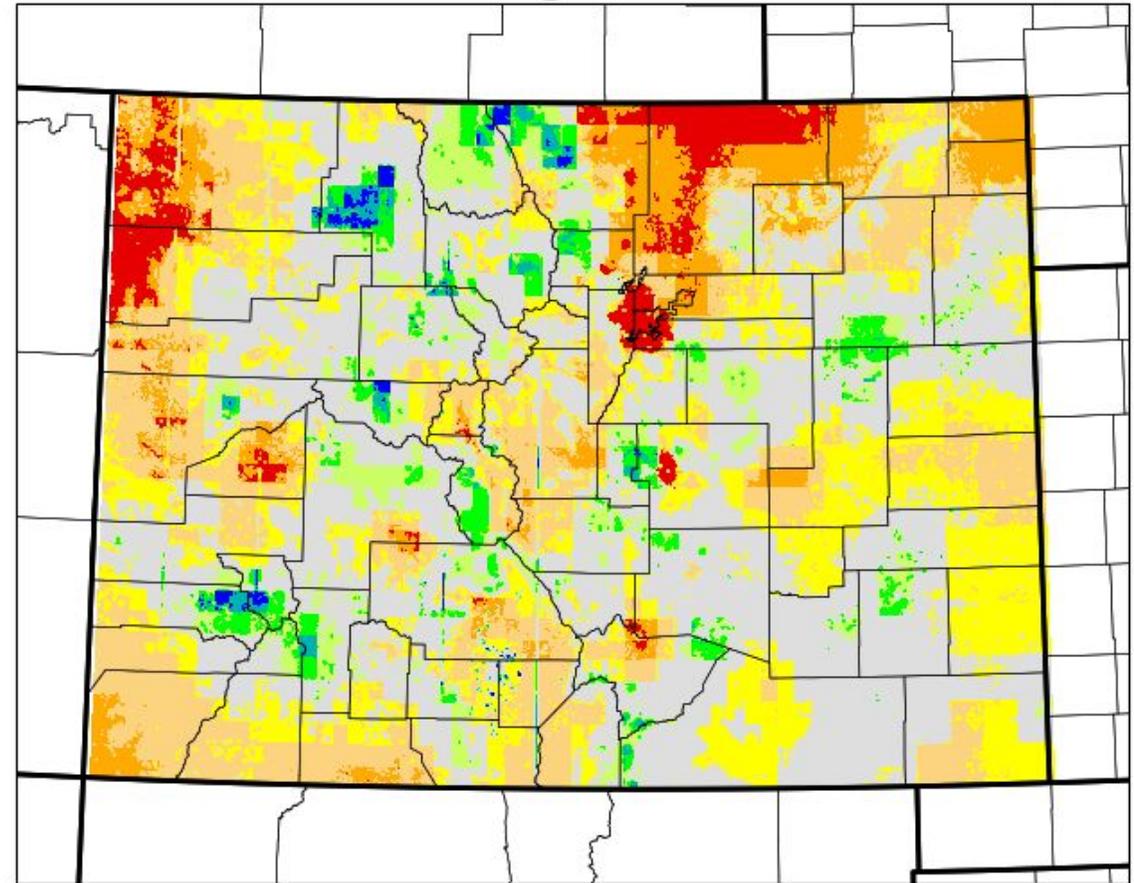


<https://climate.colostate.edu/drought/index.html#soil>

## Terrestrial Water Storage Percentiles 02/20/2025

Groundwater products indicating very dry conditions in parts of northern and western Colorado

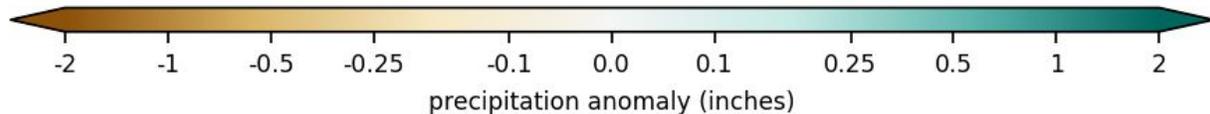
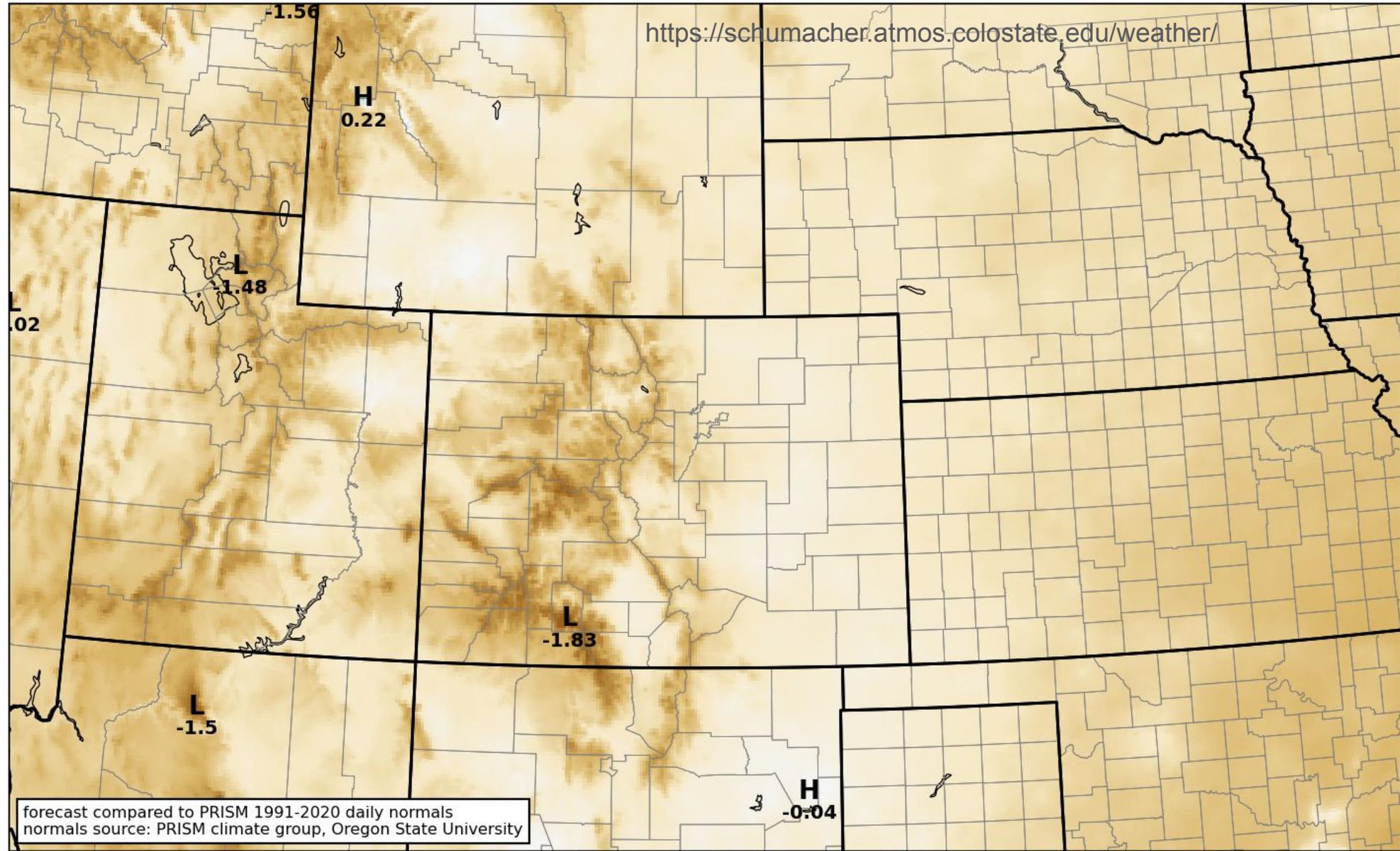
This product integrates satellite groundwater retrievals and modeled soil moisture. It also includes snowpack and canopy moisture



<https://climate.colostate.edu/drought/index.html#soil>

# Spring/Summer Outlook



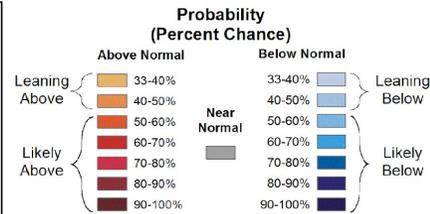
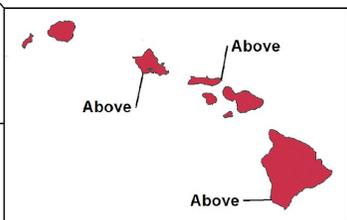
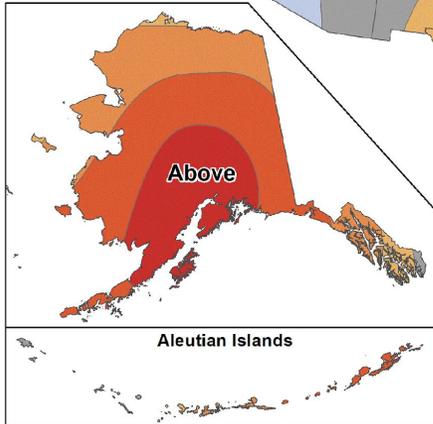
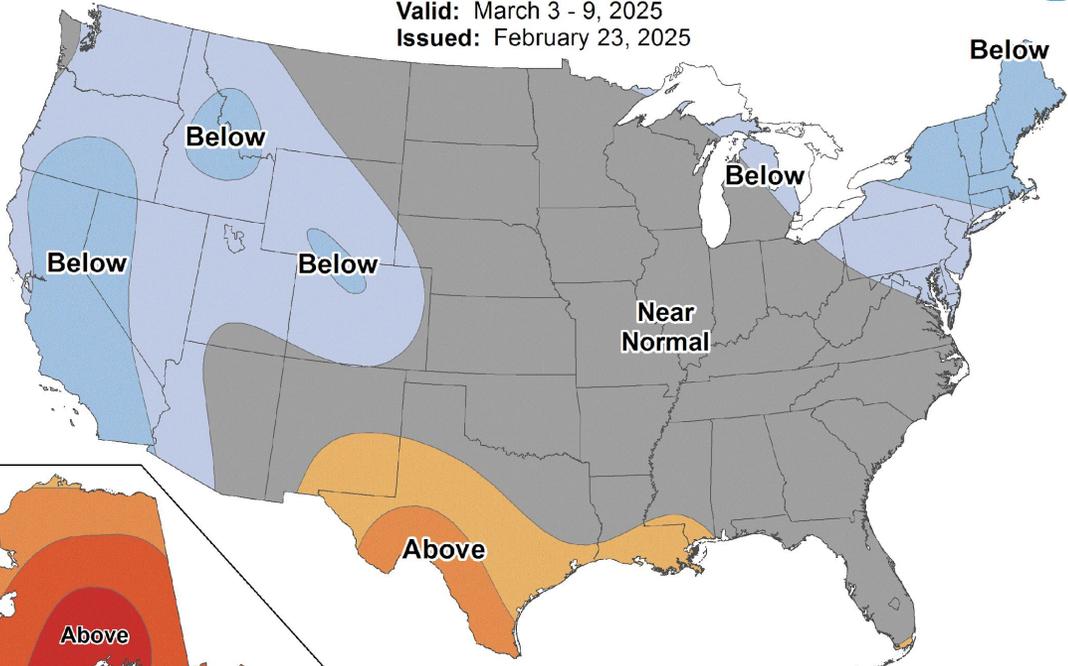




# 8-14 Day Temperature Outlook



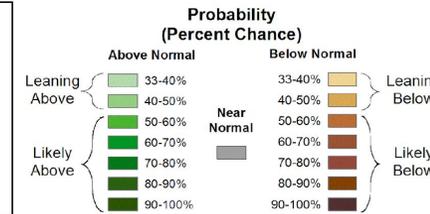
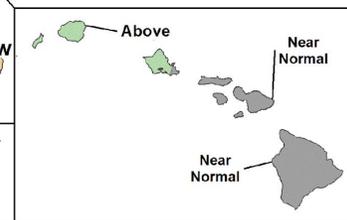
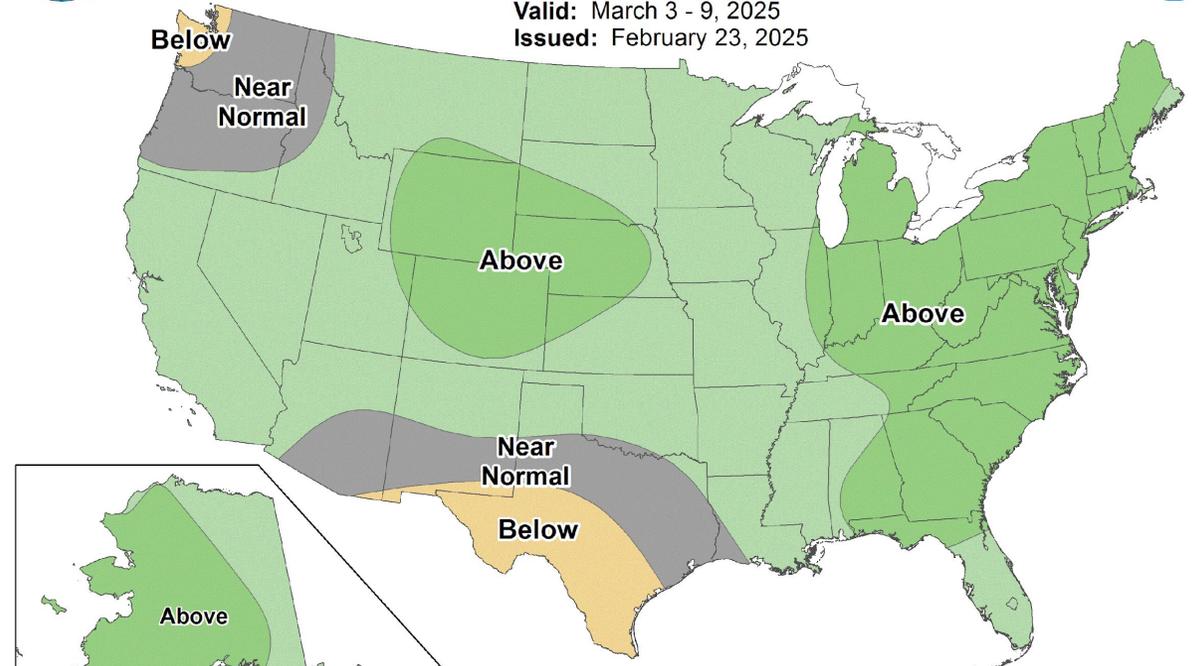
Valid: March 3 - 9, 2025  
Issued: February 23, 2025



# 8-14 Day Precipitation Outlook

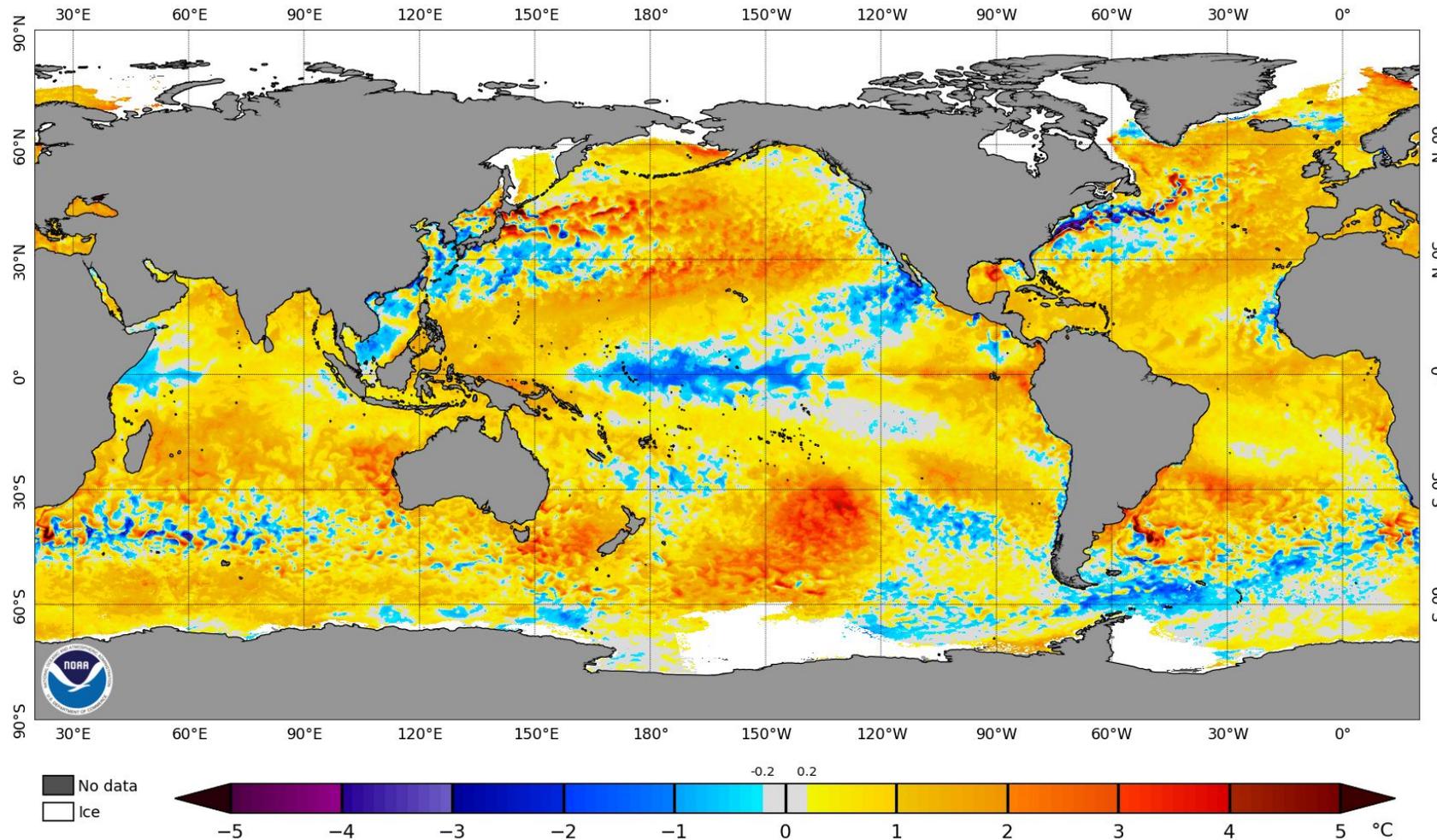


Valid: March 3 - 9, 2025  
Issued: February 23, 2025

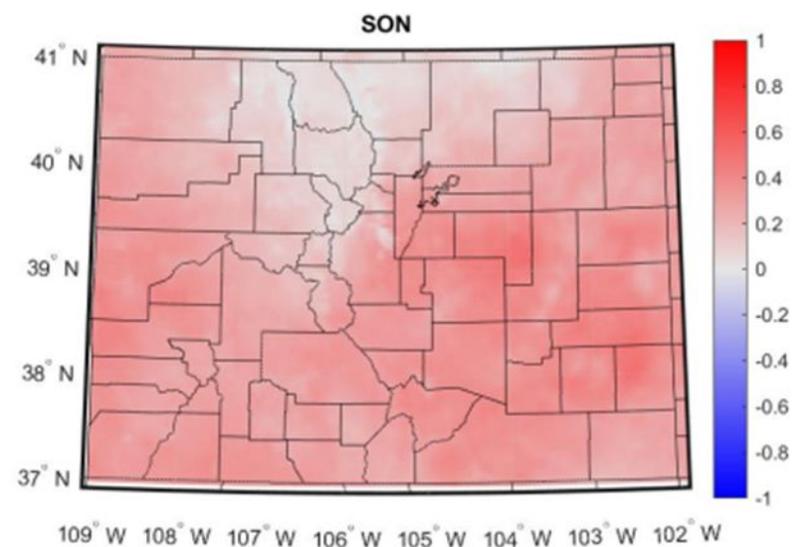
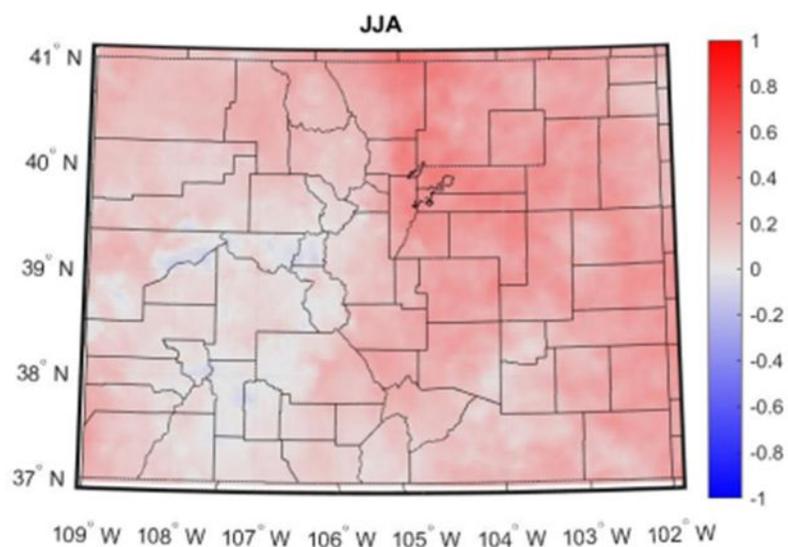
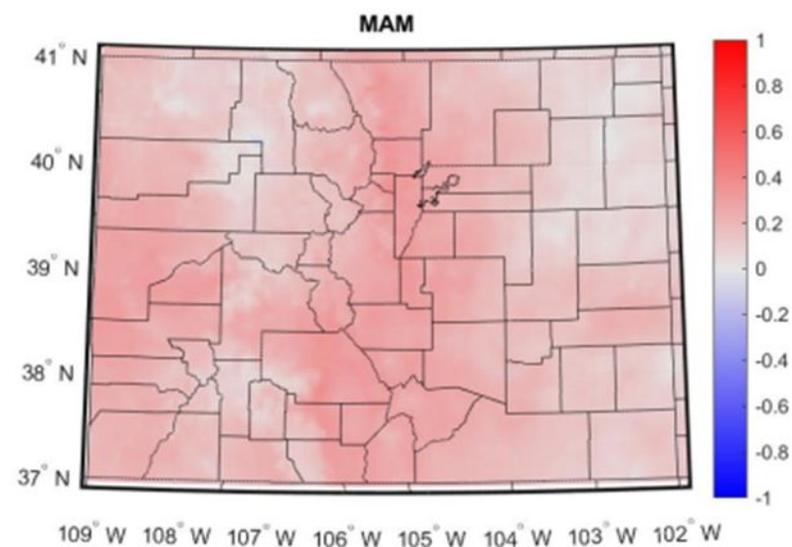
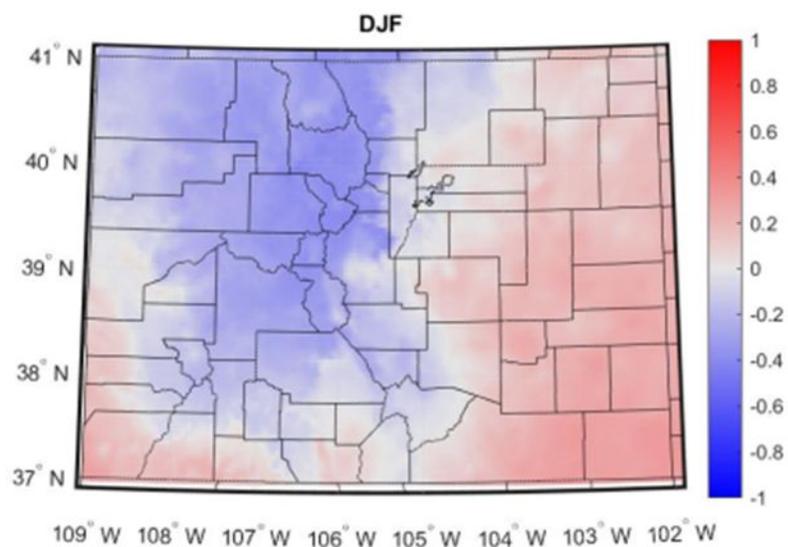


# Beyond the Forecast (El Niño/La Niña)

NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 23 Feb 2025



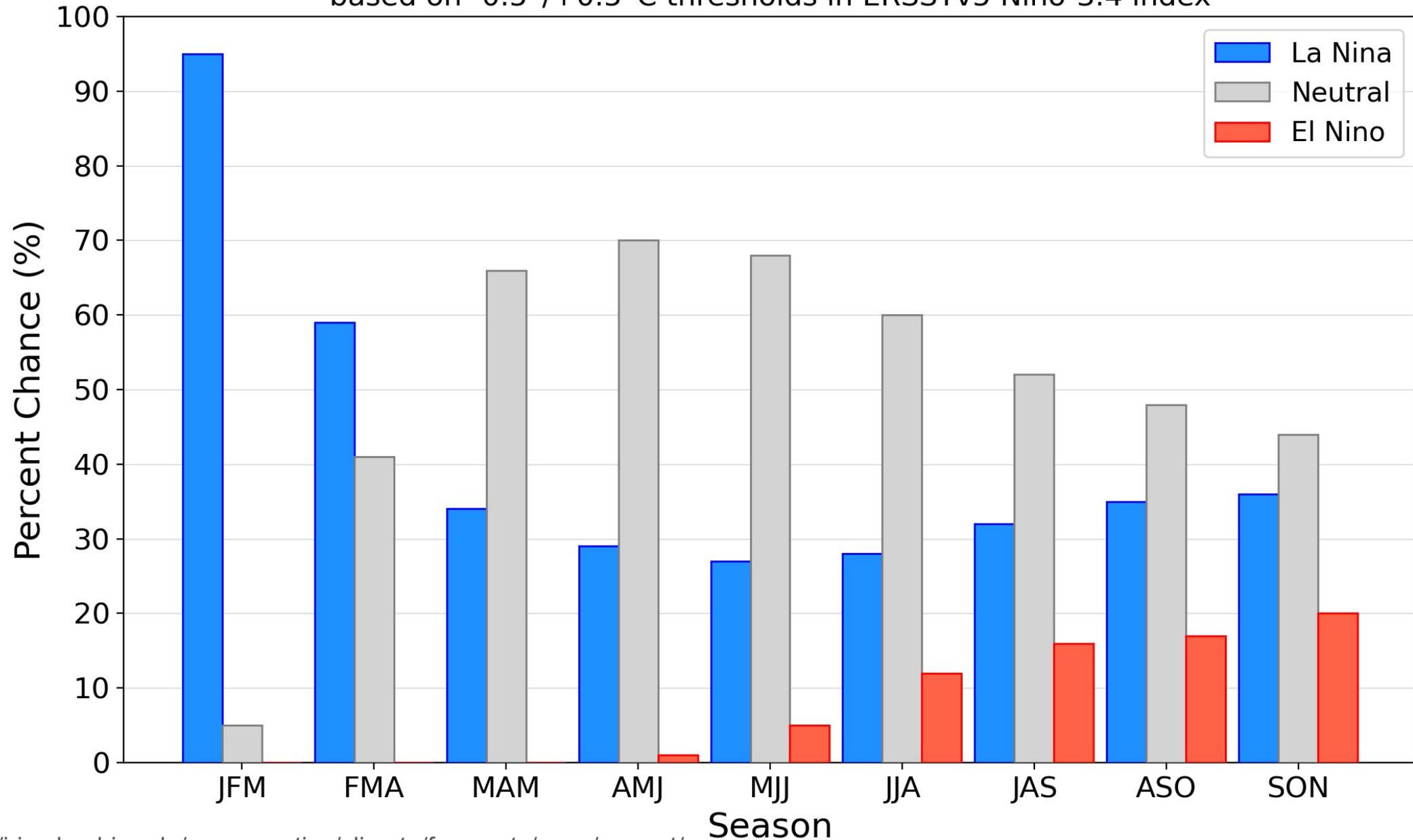
## Correlation Between ENSO ONI and Seasonal Precipitation in Colorado (1951-2020)



Blue = La Niña wetter    Red = El Niño wetter

# Official NOAA CPC ENSO Probabilities (issued February 2025)

based on  $-0.5^{\circ}/+0.5^{\circ}\text{C}$  thresholds in ERSSTv5 Niño-3.4 index

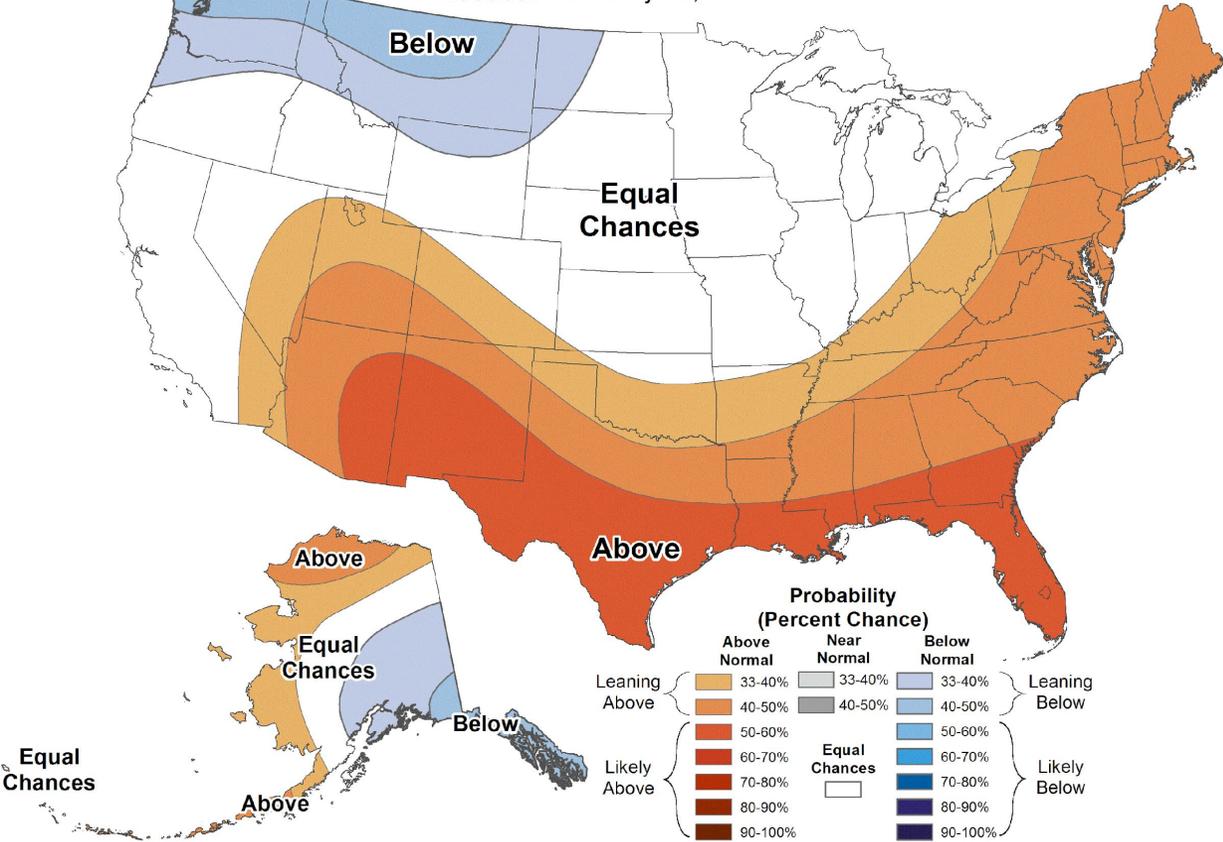




# Seasonal Temperature Outlook



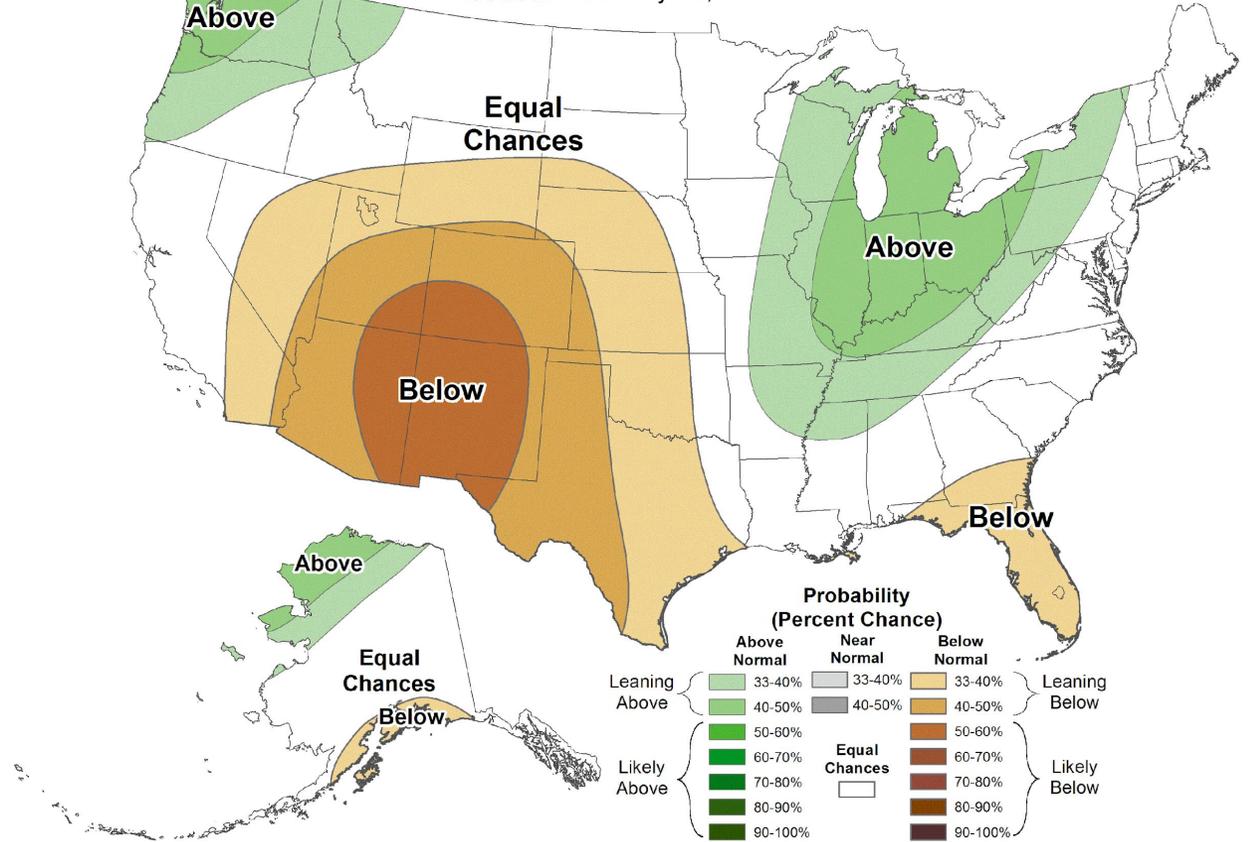
Valid: Mar-Apr-May 2025  
Issued: February 20, 2025



# Seasonal Precipitation Outlook



Valid: Mar-Apr-May 2025  
Issued: February 20, 2025

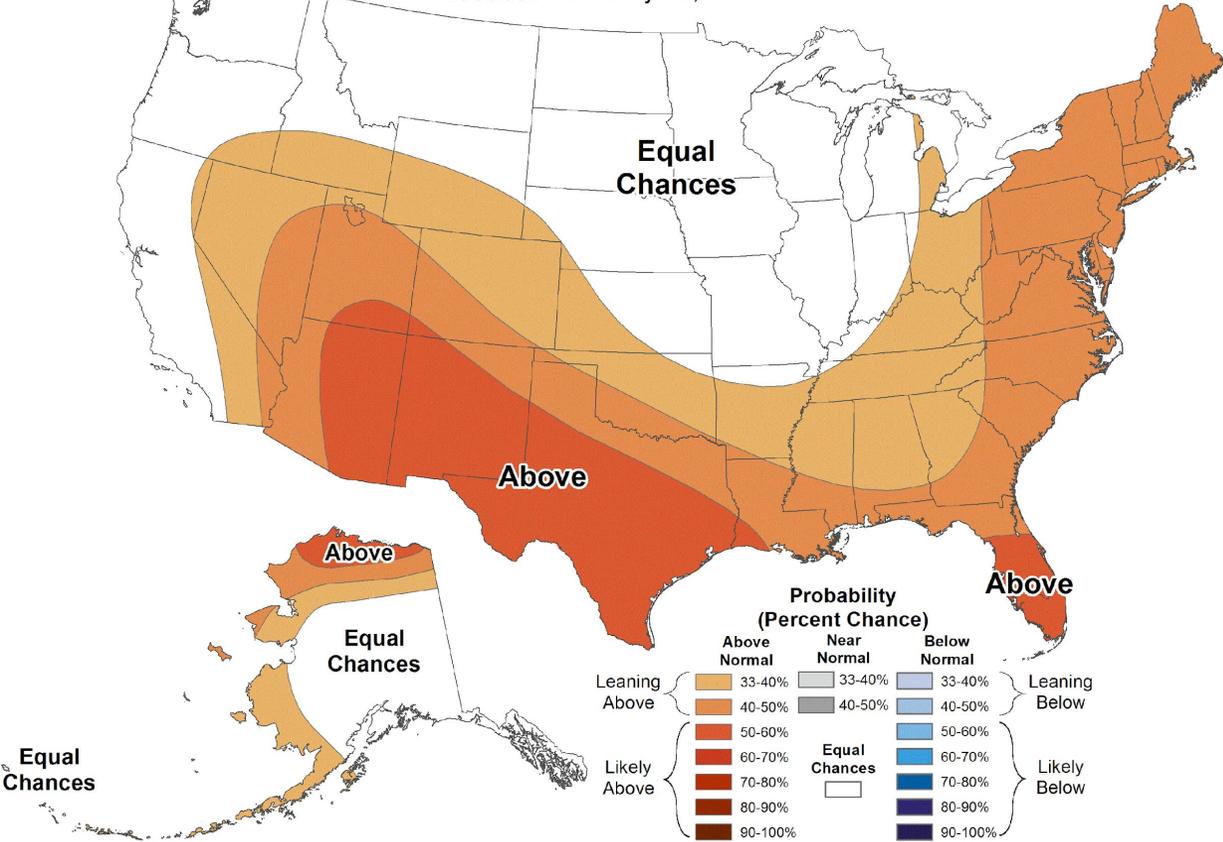




# Seasonal Temperature Outlook



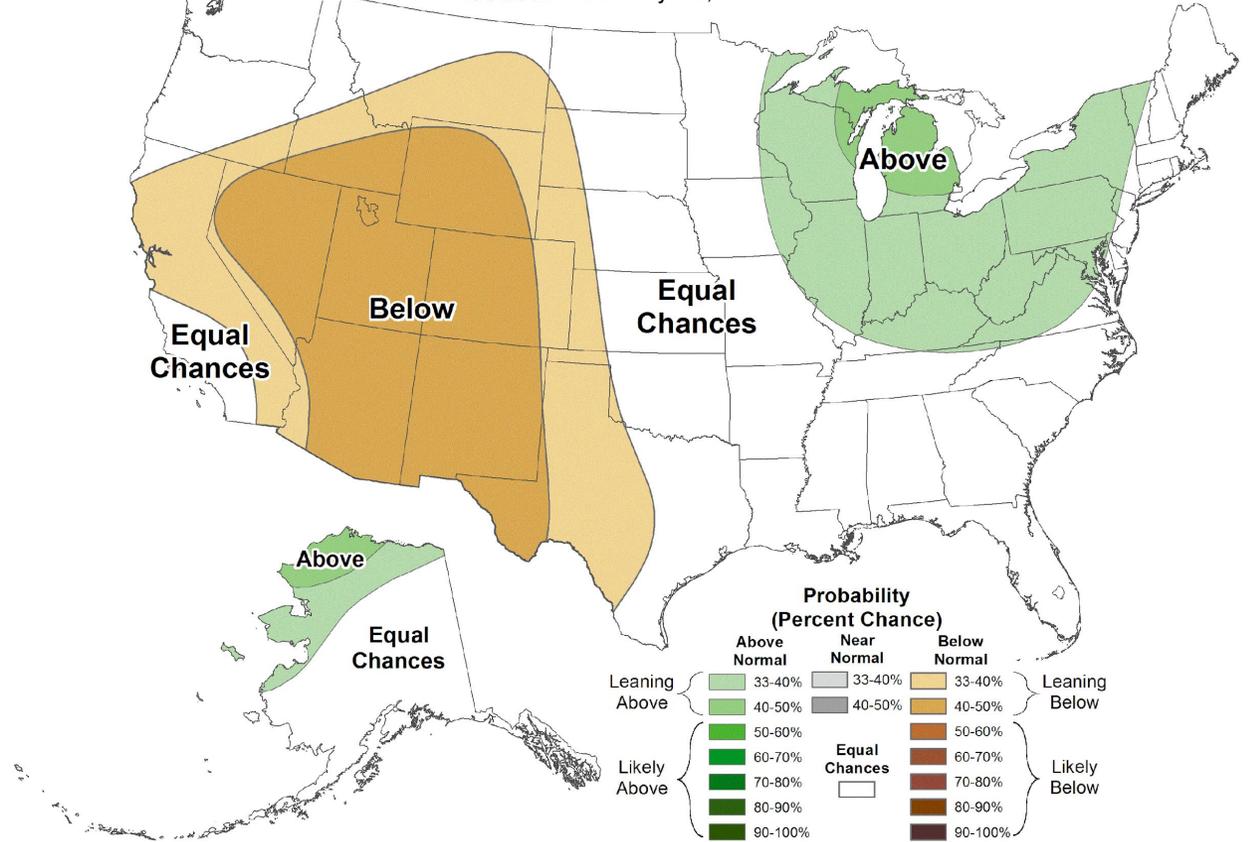
Valid: Apr-May-Jun 2025  
Issued: February 20, 2025



# Seasonal Precipitation Outlook



Valid: Apr-May-Jun 2025  
Issued: February 20, 2025

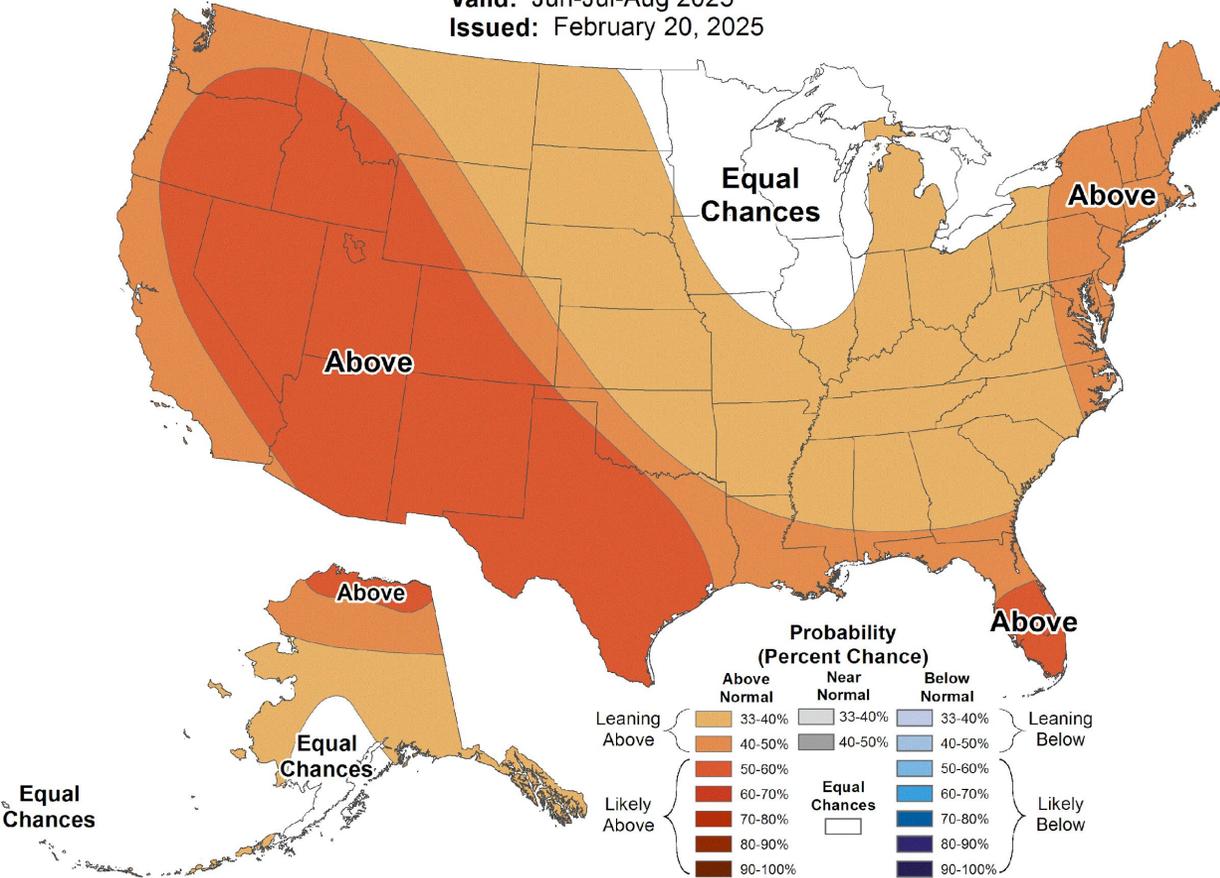




# Seasonal Temperature Outlook



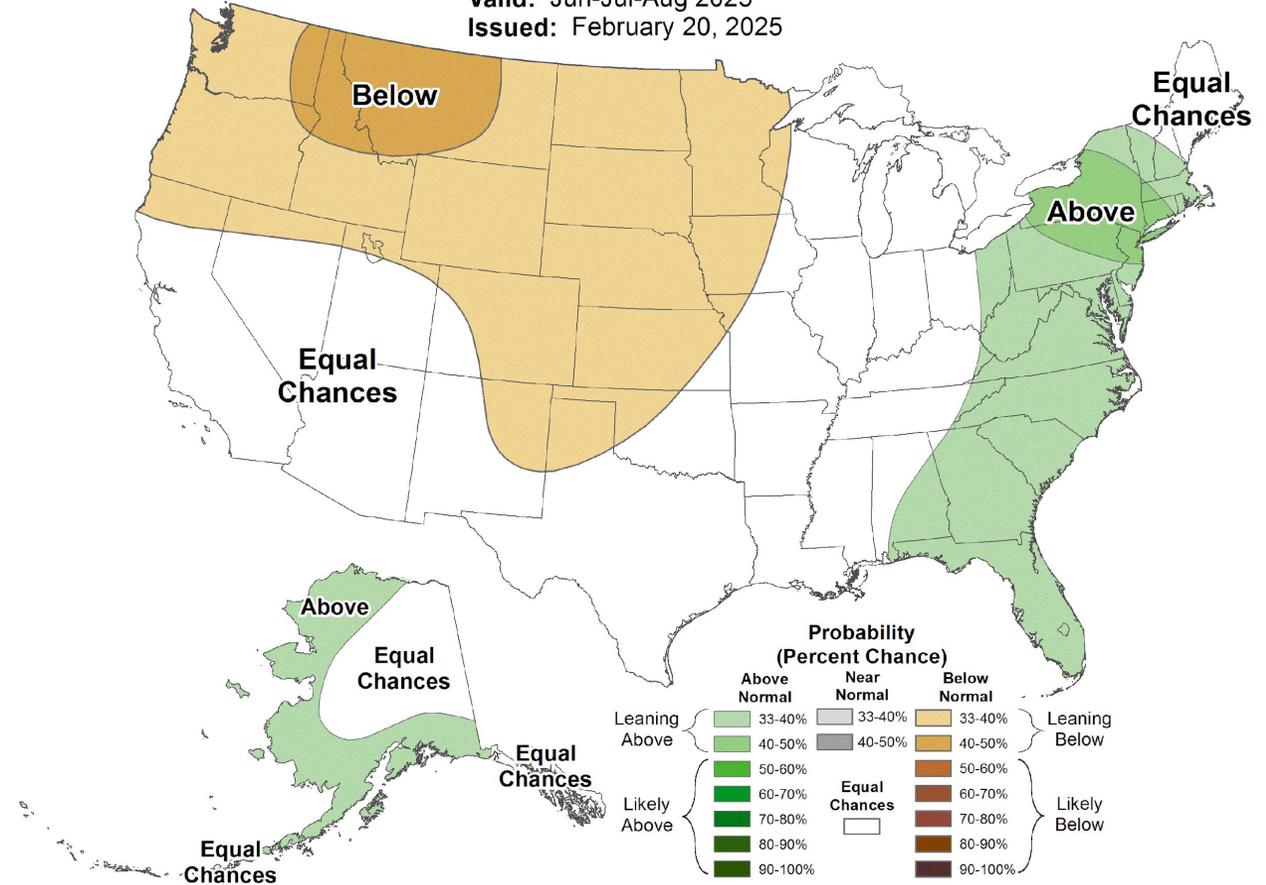
Valid: Jun-Jul-Aug 2025  
Issued: February 20, 2025



# Seasonal Precipitation Outlook



Valid: Jun-Jul-Aug 2025  
Issued: February 20, 2025



# Takeaways

- January ended 6 °F cooler than 1991-2020 normal statewide
- February will likely end with near normal temperatures statewide, but with large variability around the mean. This month has been bookended by warm spells with a strong cold snap in the middle
- Drought conditions have improved in north-central Colorado but persist on the northern Front Range. Drought conditions are intensifying on the West Slopes, leading to increasing concerns about spring water supply (more from NRCS)
- Weak La Niña conditions remain in place across the Equatorial Pacific, but low SSTs are waning
- If La Niña remains in place, or has lingering impacts, this is correlated with drier than average spring conditions in Colorado and a much lower risk of a wet extreme
- The early summer outlook suggests an increased chance of warmer than normal temperatures with a very slight tilt towards drier than normal conditions



# Colorado Climate Center (Contact Us)

**Thanks, and let's keep in touch!**

**Russ Schumacher (State Climatologist) – [russ.schumacher@colostate.edu](mailto:russ.schumacher@colostate.edu)**

**Peter Goble (Assistant State Climatologist) – [peter.goble@colostate.edu](mailto:peter.goble@colostate.edu)**

**Viewing this, and previous WATF Briefings:**

**[http://climate.colostate.edu/ccc\\_archive.html](http://climate.colostate.edu/ccc_archive.html)**

# Thank you

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ATMOSPHERIC SCIENCE  
COLORADO STATE UNIVERSITY