

# Missouri Weather Summary and Outlook

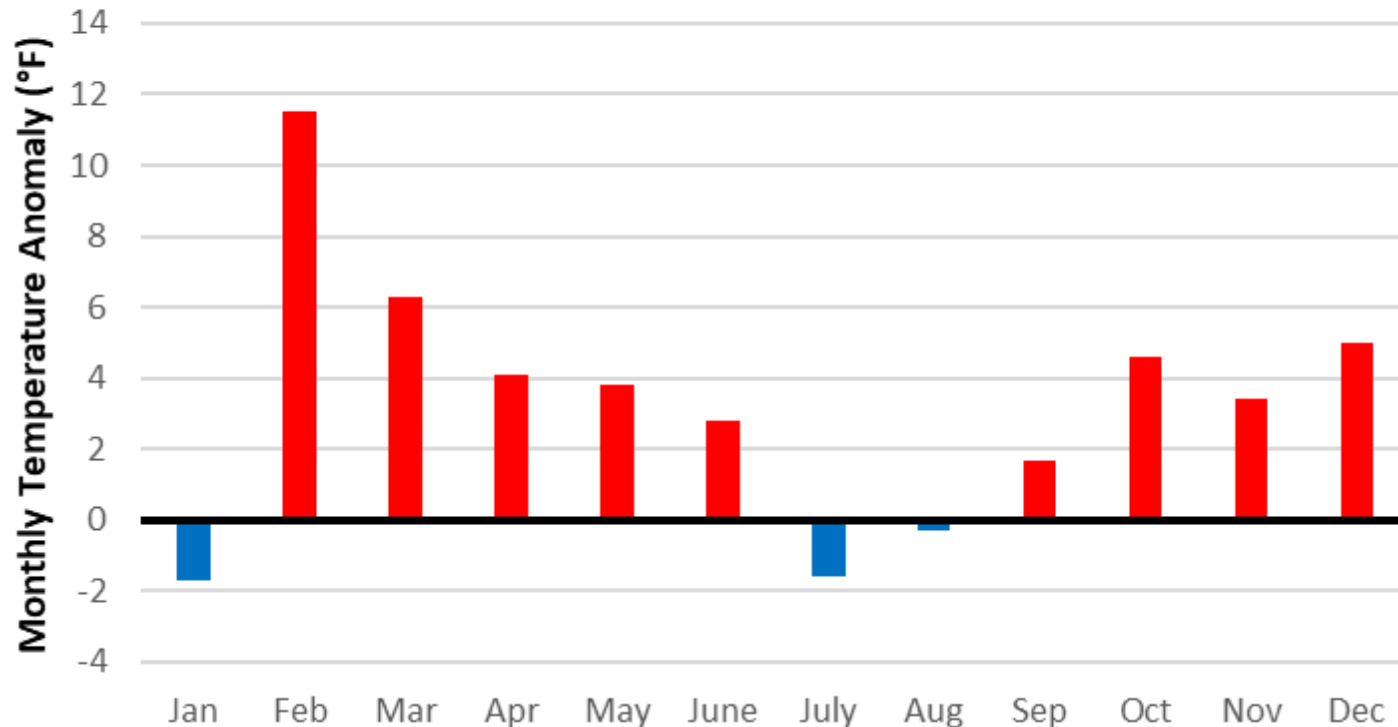
*2025 Weather and Crop Price Outlooks*  
*March 6, 2025*

Zack Leasor  
State Climate Extension Specialist | Assistant Professor



# 2024 Climate Summary

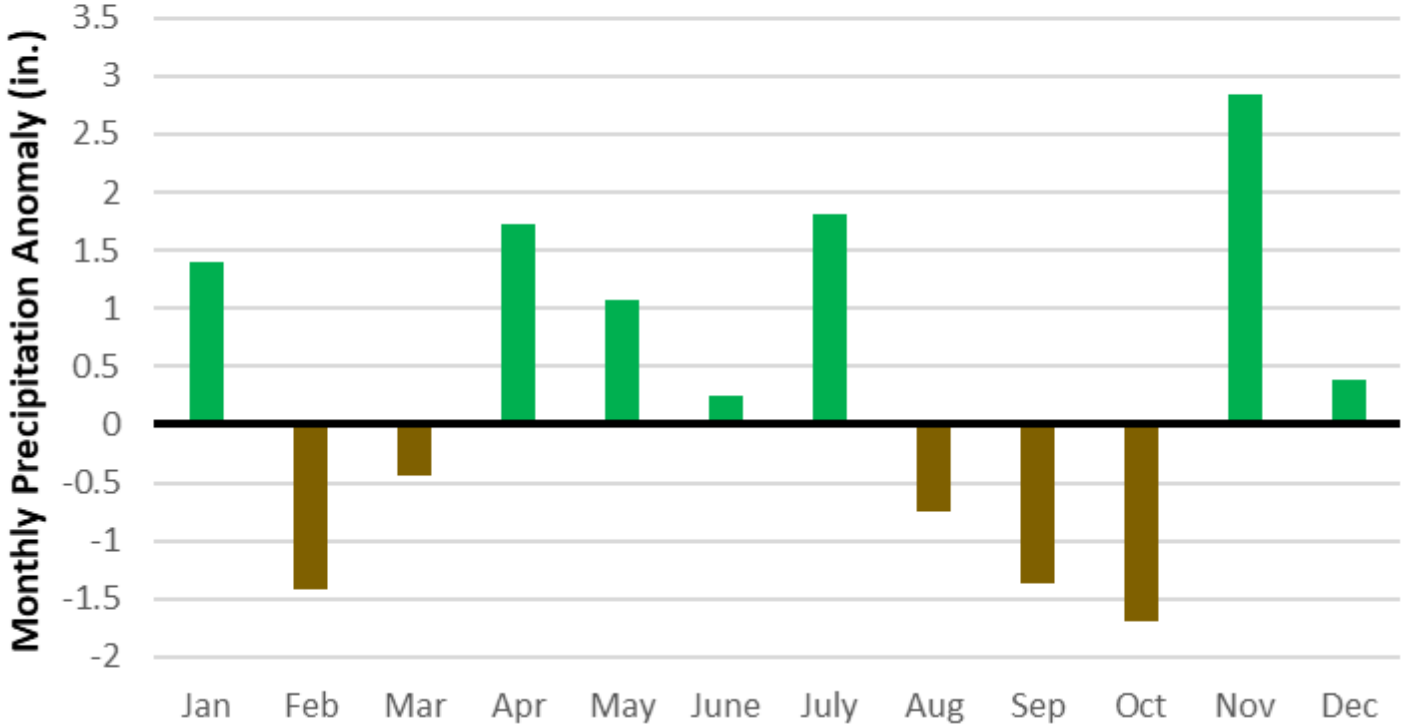
Missouri 2024 Monthly Temperature Departures  
from Average (1901 - 2000)



- 2024 was Missouri's *2<sup>nd</sup> warmest year on record* behind 2012
- Missouri's average annual temperature (58.0 °F) was *3.5 °F warmer than average*

# 2024 Climate Summary

### Missouri 2024 Monthly Precipitation Departures from Average (1901 - 2000)



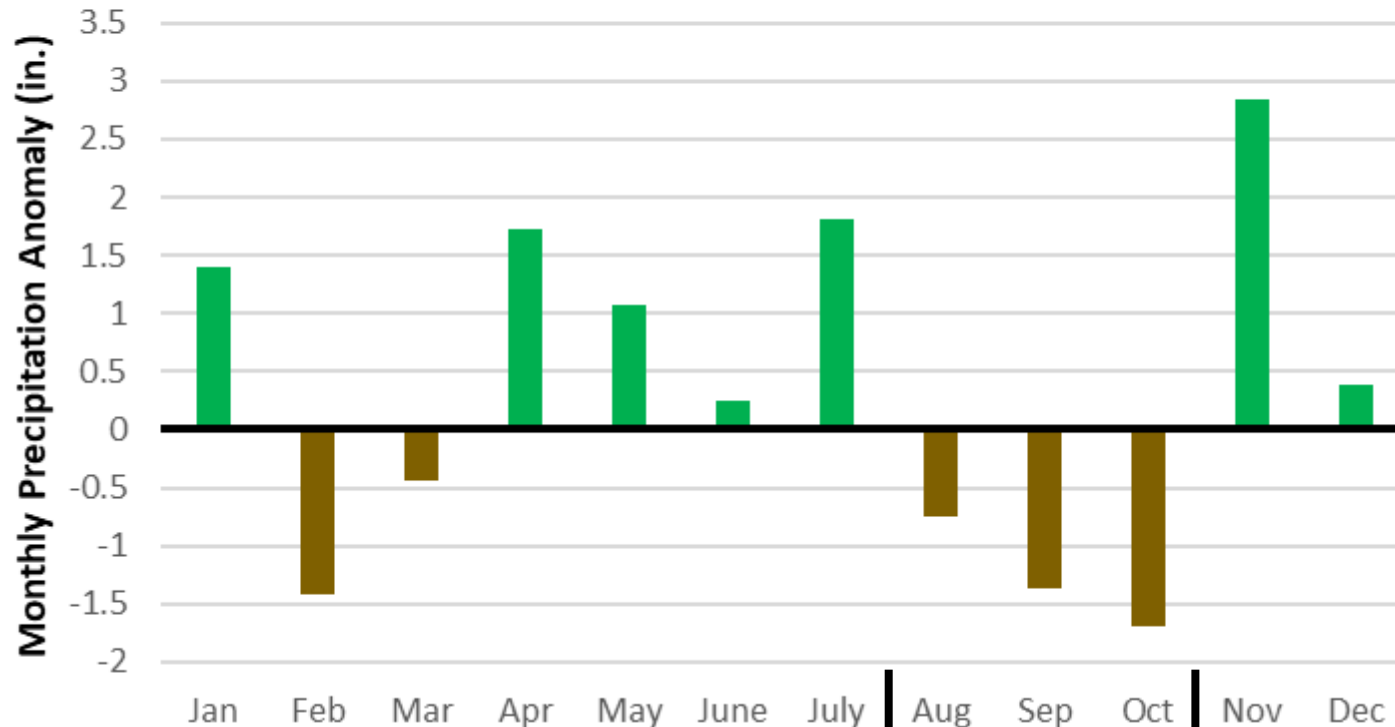
- Missouri's statewide average precipitation during December (2.69") was *0.38" above average*
- 2024 Annual Precipitation: 43.86" (+ 3.36")

Ranks based on data from 1895 to 2024 (130 years)

<https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/>

# 2024 Climate Summary

## Missouri 2024 Monthly Precipitation Departures from Average (1901 - 2000)

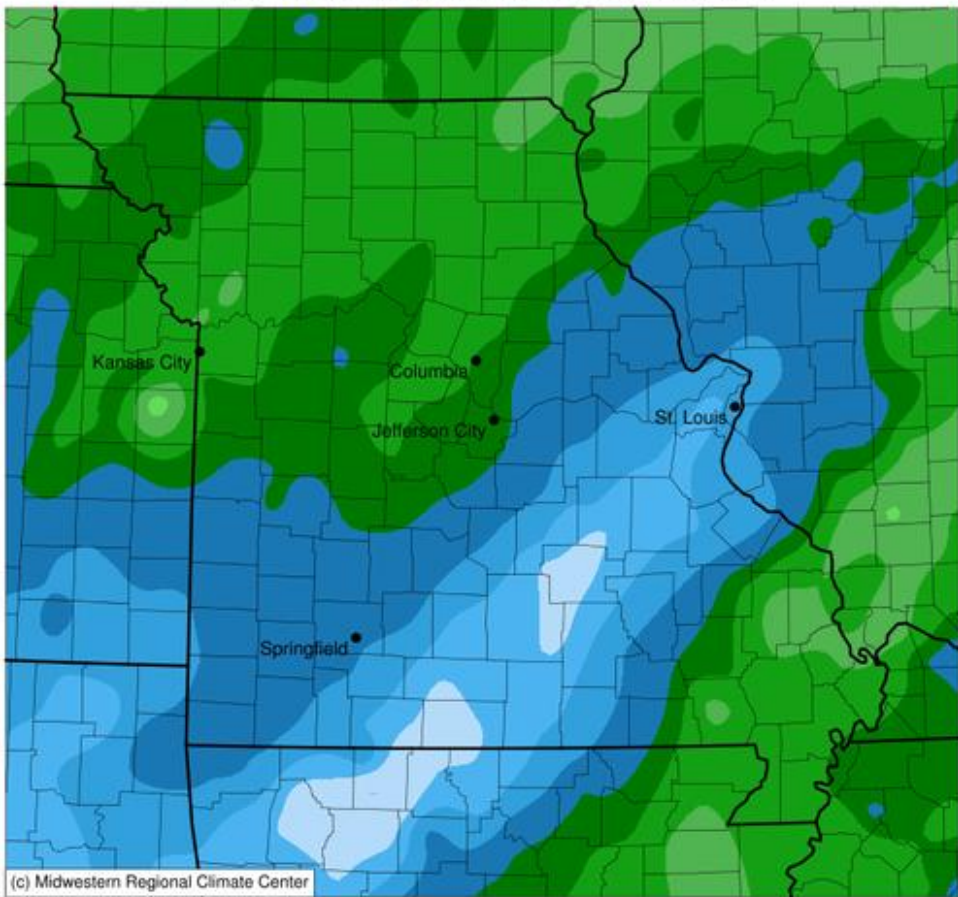


- Missouri's statewide average precipitation during December (2.69") was *0.38" above average*
- 2024 Annual Precipitation: 43.86" (+ 3.36")

11<sup>th</sup> driest August-October on record

### Accumulated Precipitation (in)

October 28, 2024 to November 11, 2024



### Maximum 1-Day Total Precipitation for Missouri

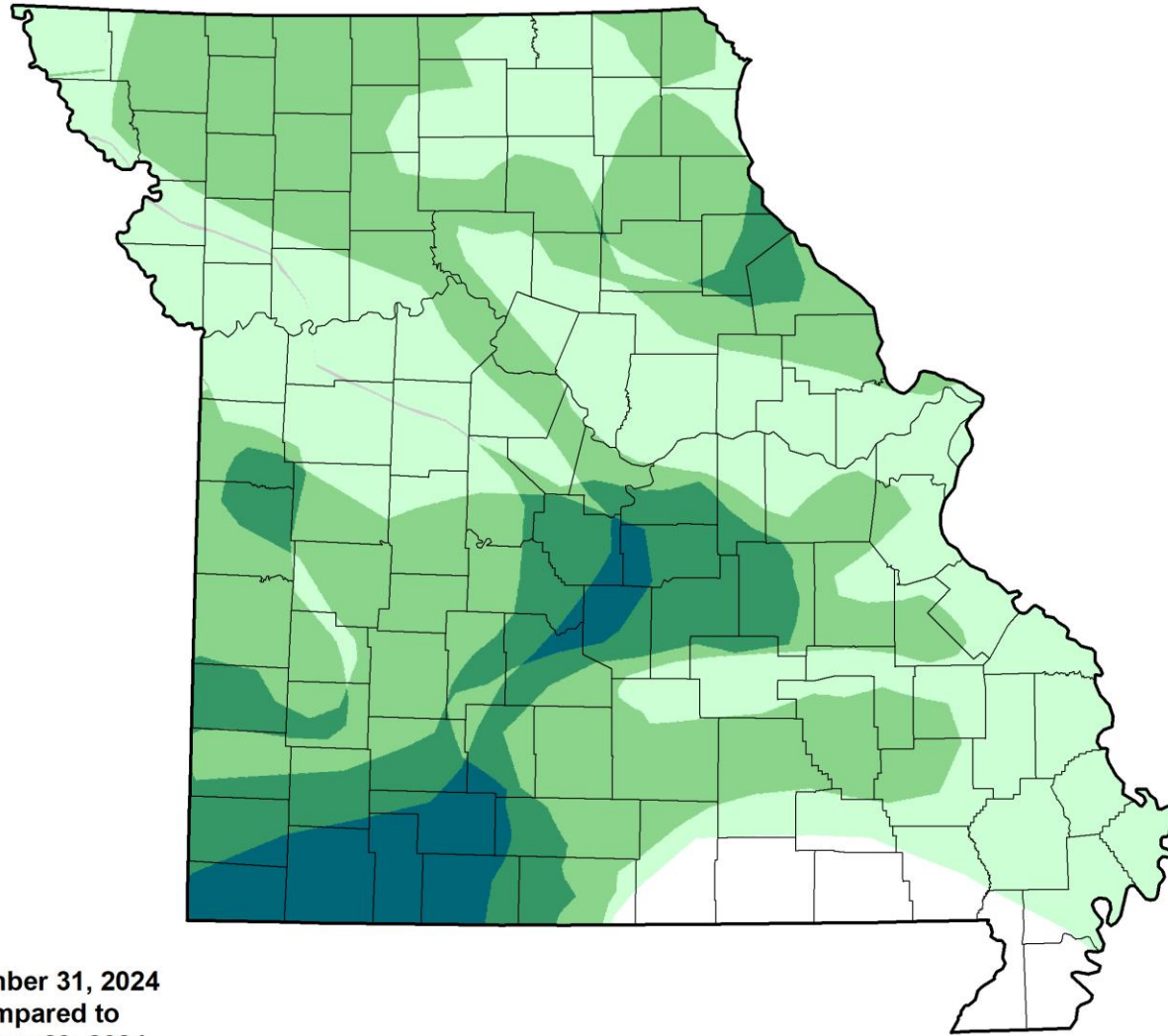
Click column heading to sort ascending, click again to sort descending.

Name	Station Type	County	Value	Ending Date
MOUNTAIN GROVE 2 N	COOP	Wright	9.83	2024-11-05
SALEM	COOP	Dent	9.47	2024-11-05
SALEM 1.8 NW	CoCoRaHS	Dent	9.05	2024-11-05
LICKING 4N	COOP	Texas	8.92	2024-11-05
HOUSTON 2.0 S	CoCoRaHS	Texas	8.86	2024-11-05
HOUSTON 1.1 NE	CoCoRaHS	Texas	8.85	2024-11-05
SALEM 3.5 E	CoCoRaHS	Dent	8.70	2024-11-05
WASOLA 5N	COOP	Douglas	8.61	2024-11-05
SALEM 5.0 WNW	CoCoRaHS	Dent	8.25	2024-11-05
CLEARWATER DAM	COOP	Wayne	8.10	2005-11-15

***Missouri's all time November 1- and 2-day maximum rainfall records were broken on November 4-5!***

# U.S. Drought Monitor Class Change - Missouri

9 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

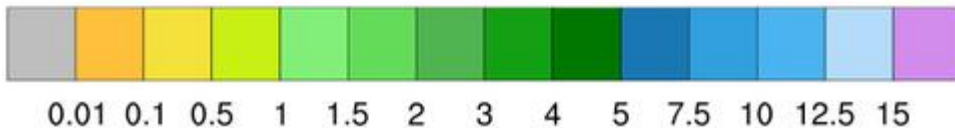
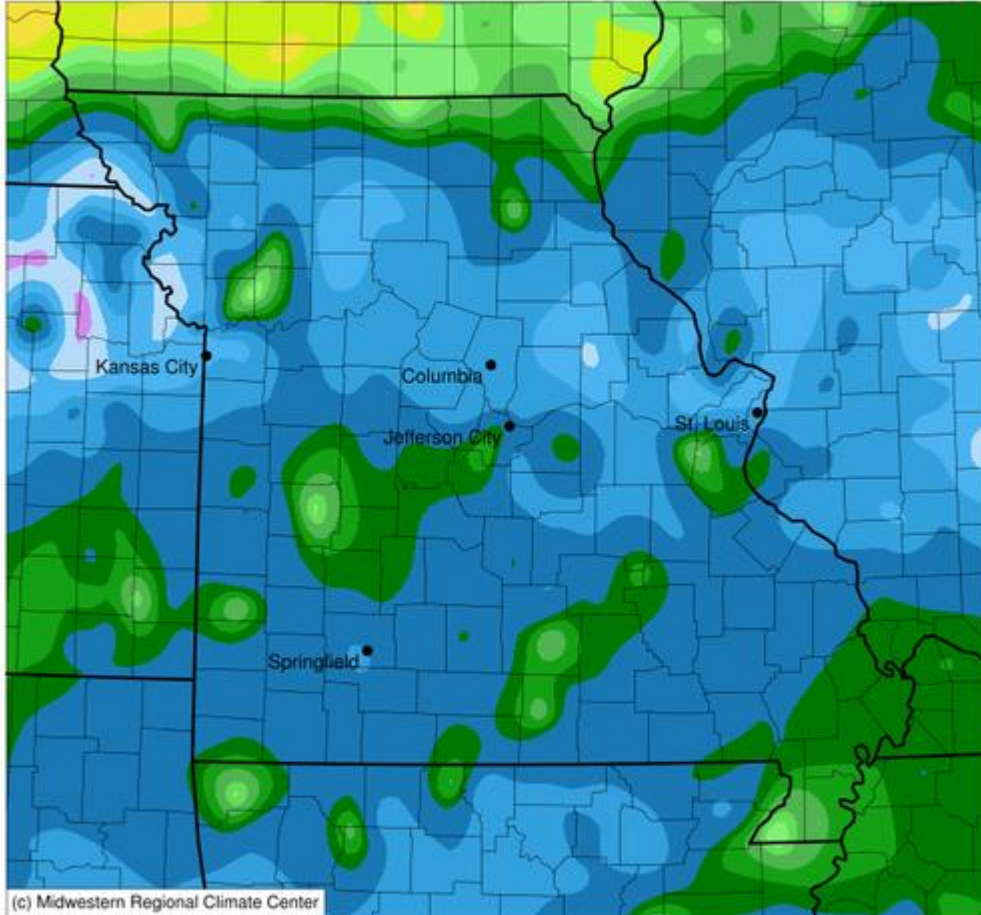
December 31, 2024  
compared to  
October 29, 2024

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

# January 2025 Summary: Snowy and Cold

## Accumulated Snowfall (in)

January 01, 2025 to January 31, 2025



- Missouri's statewide average temperature during January 2025 was 29.4°F (- 2.5°F)
- January was the first month with below average monthly average temperatures since August 2024
- Missouri's statewide average precipitation (liquid equivalent) in January was 1.94" (- 0.15")

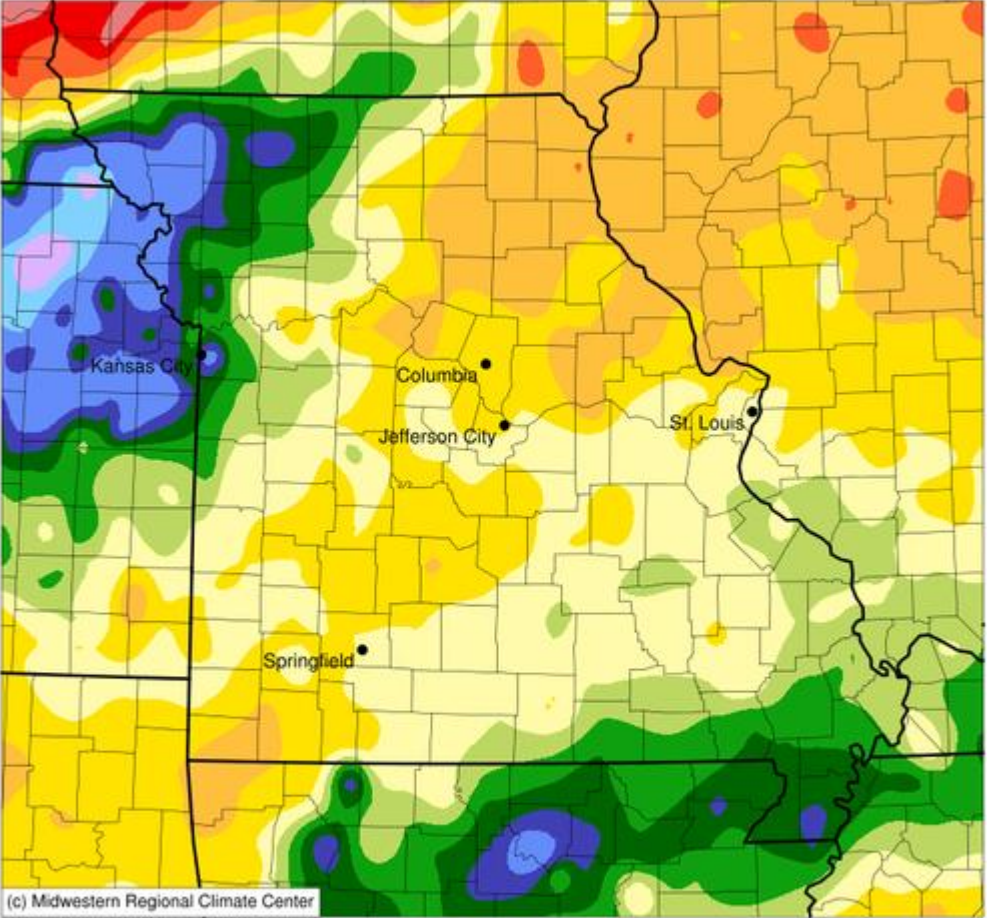
Ranks based on data from 1895 to 2024 (130 years)

<https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/>

# January 2025 Summary: Snowy and Cold

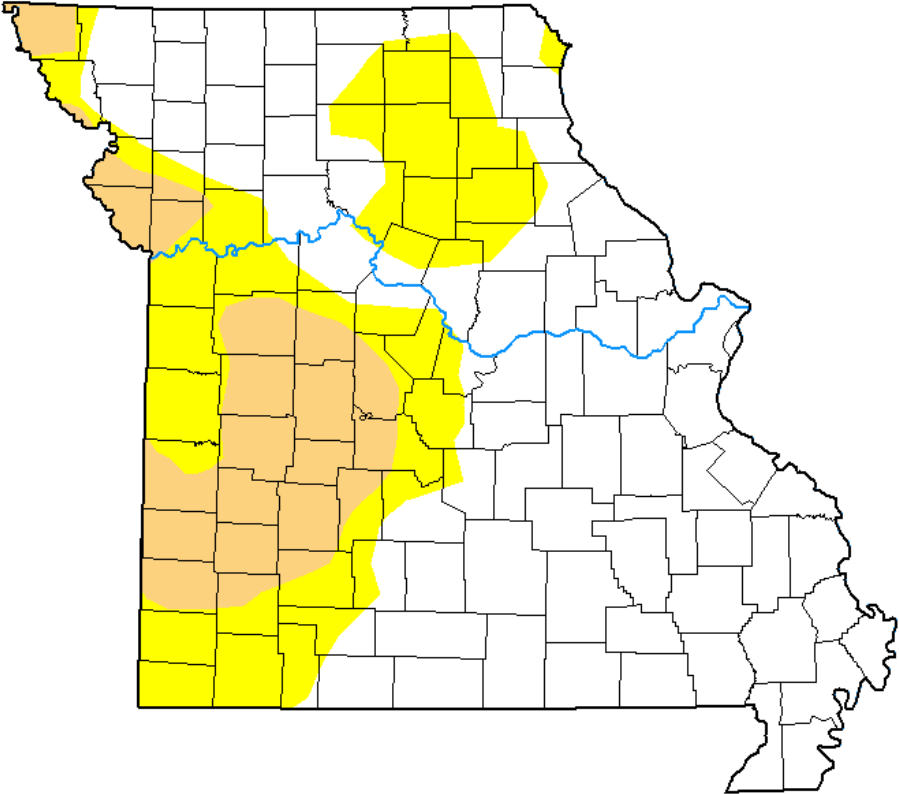
## Accumulated Precipitation: Percent of 1991-2020 Normals

January 01, 2025 to January 31, 2025



## U.S. Drought Monitor Missouri

January 28, 2025  
(Released Thursday, Jan. 30, 2025)  
Valid 7 a.m. EST



- 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

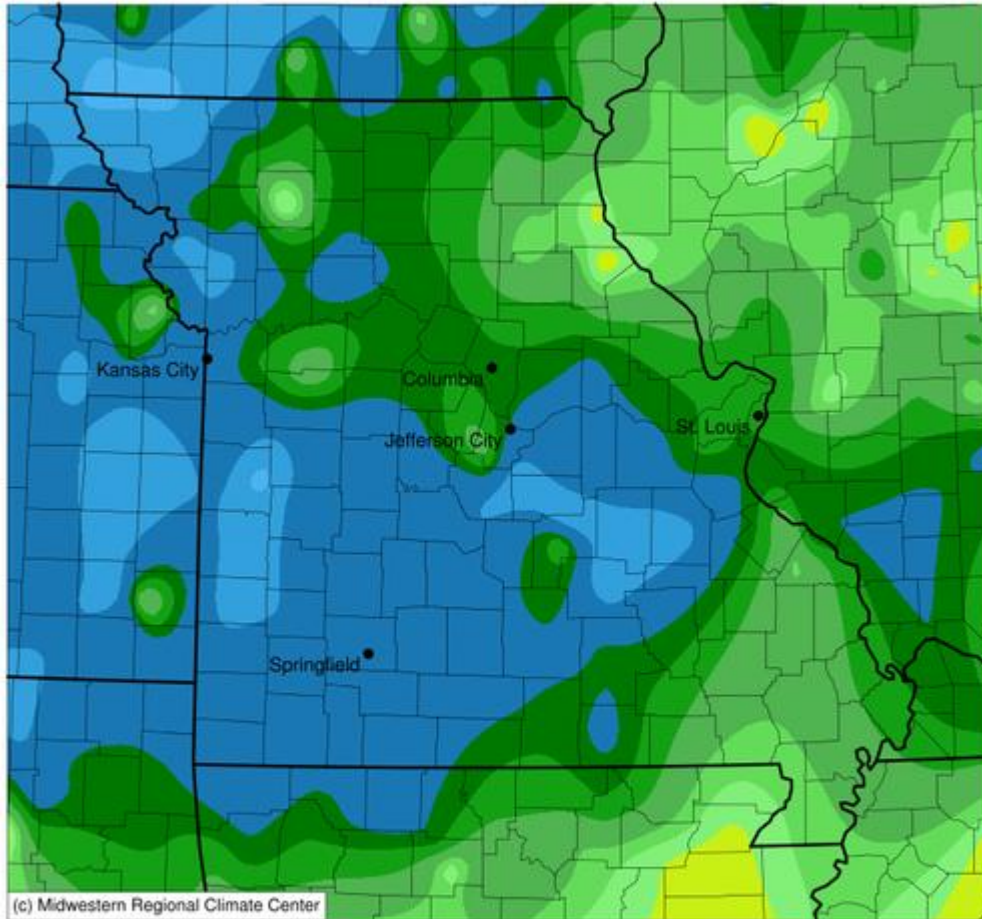


[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

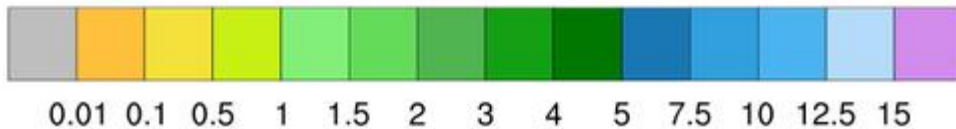
# February 2025 Summary: Snowy and Cold

## Accumulated Snowfall (in)

February 01, 2025 to February 28, 2025



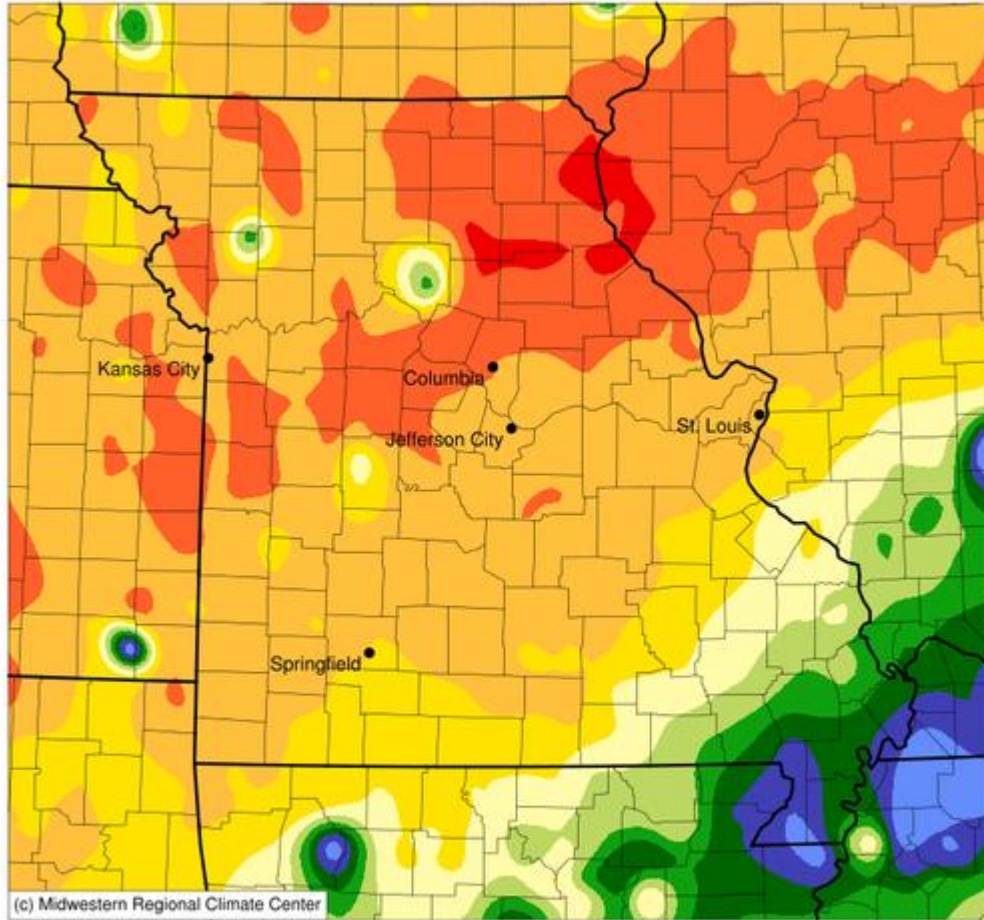
- Missouri's statewide average temperature during February 2025 was 31.5°F (- 2.3°F)
- Missouri's statewide average precipitation (liquid equivalent) in January was 1.35" (- 0.67")



# February 2025 Summary: Snowy and Cold

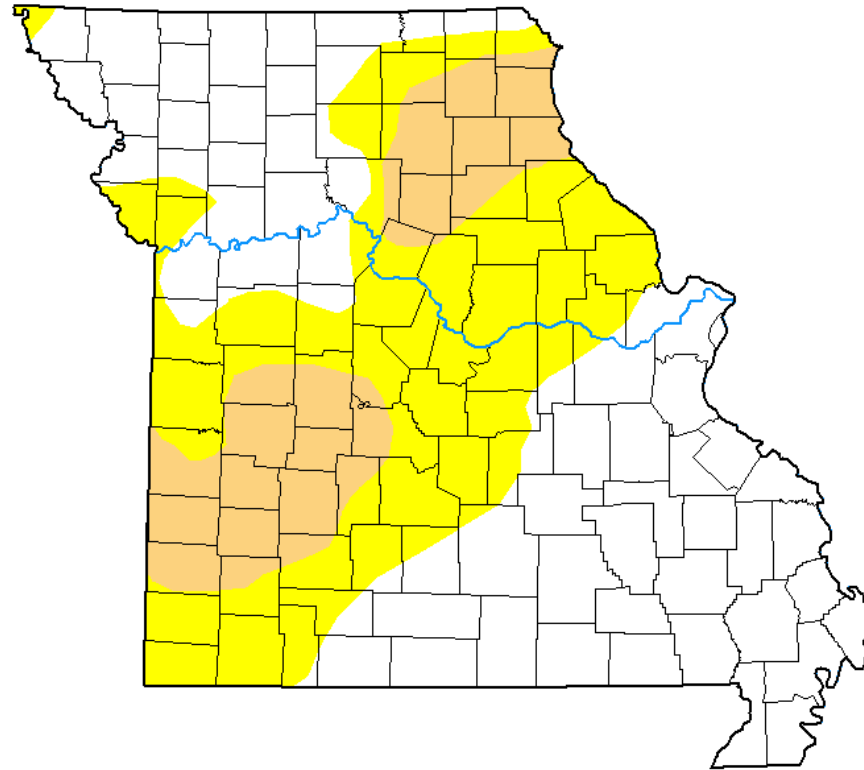
## Accumulated Precipitation: Percent of 1991-2020 Normals

February 01, 2025 to February 28, 2025



## U.S. Drought Monitor Missouri

February 25, 2025  
(Released Thursday, Feb. 27, 2025)  
Valid 7 a.m. EST



### Intensity:

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

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National Drought Mitigation Center

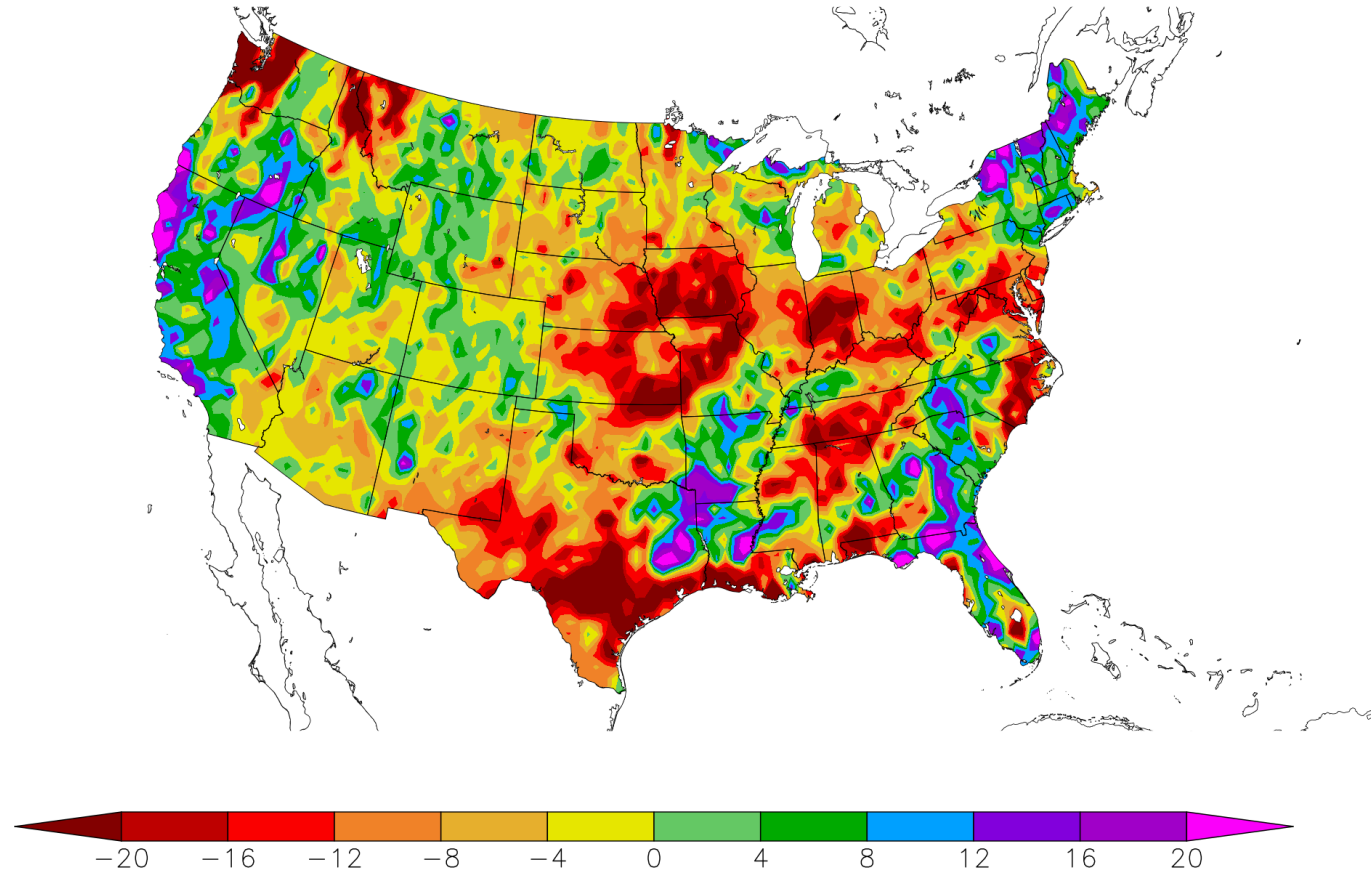


[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)



# Three Years of Drought

Departure from Normal Precipitation (in)  
3/5/2022 – 3/4/2025



Generated 3/5/2025 at HPRCC using provisional data.

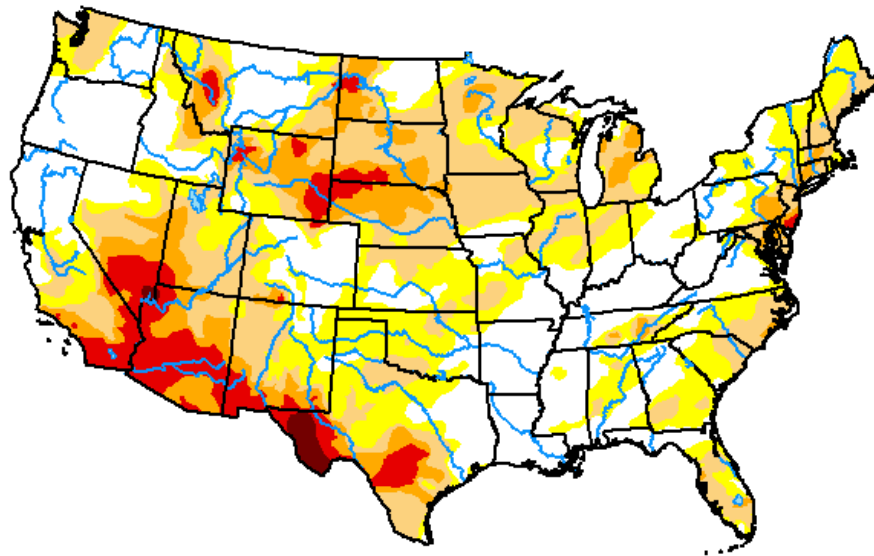
NOAA Regional Climate Centers

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

# Three Years of Drought

## U.S. Drought Monitor Contiguous U.S. (CONUS)

**February 25, 2025**  
(Released Thursday, Feb. 27, 2025)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	33.64	66.36	41.68	17.44	7.13	0.66
<b>Last Week</b> <i>02-18-2025</i>	32.60	67.40	39.97	17.38	7.14	0.66
<b>3 Months Ago</b> <i>11-26-2024</i>	26.03	73.97	41.45	16.34	4.91	0.60
<b>Start of Calendar Year</b> <i>01-07-2025</i>	35.67	64.33	36.72	14.76	4.76	0.56
<b>Start of Water Year</b> <i>10-01-2024</i>	29.35	70.65	31.50	9.29	2.73	0.50
<b>One Year Ago</b> <i>02-27-2024</i>	53.16	46.84	21.59	7.79	1.49	0.14

Intensity:



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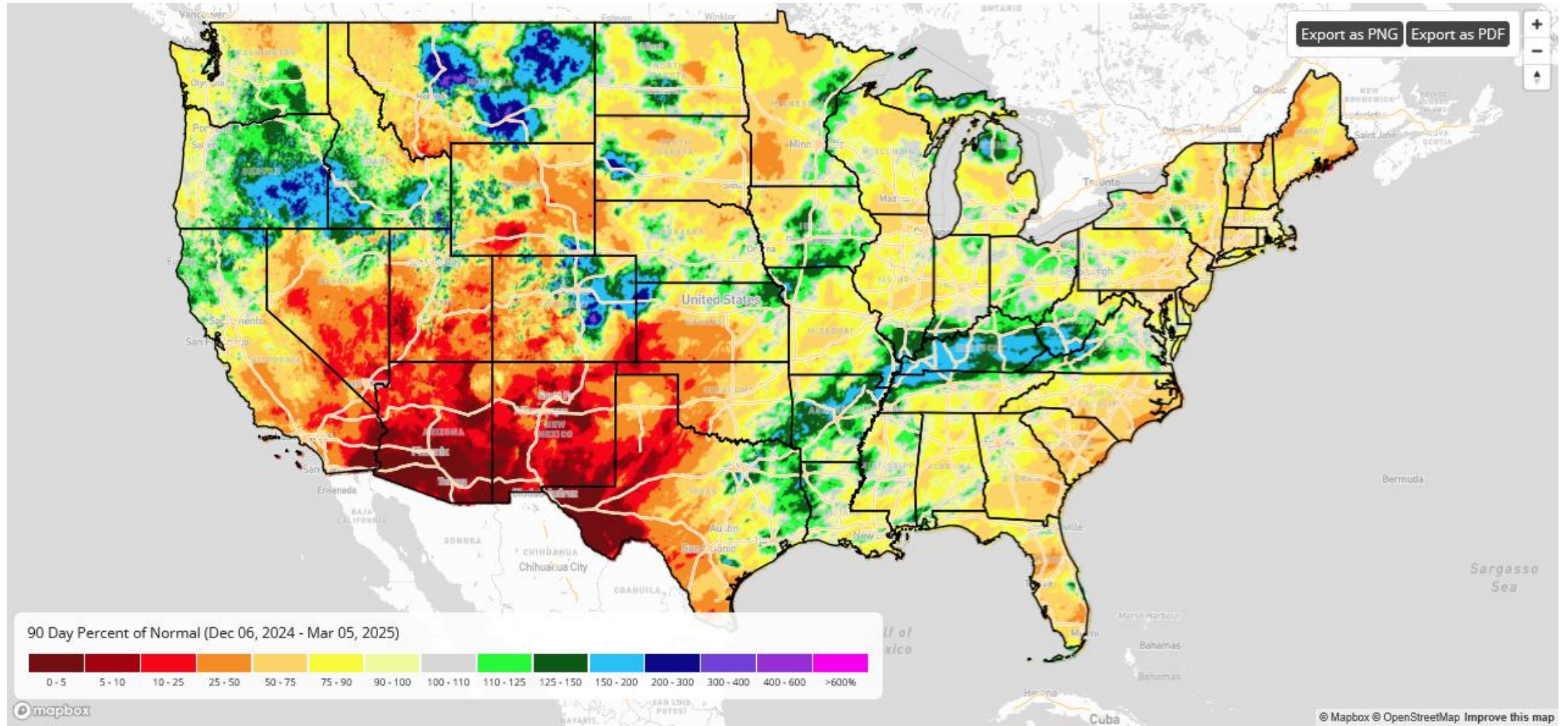
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Brian Fuchs  
National Drought Mitigation Center



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

# Drought Update: March 2025

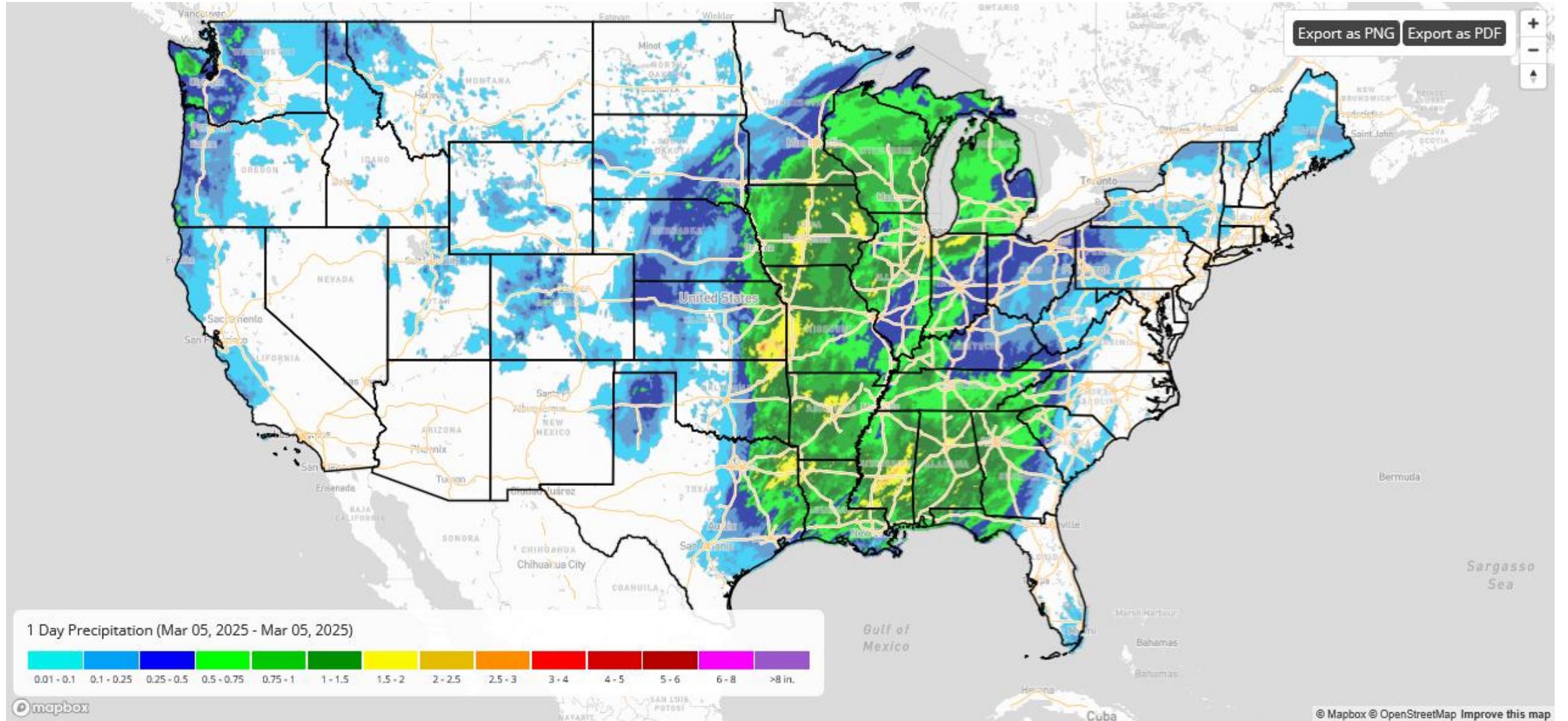


[https://www.srcc.tamu.edu/water\\_portal/](https://www.srcc.tamu.edu/water_portal/)

# Drought Update: March 2025

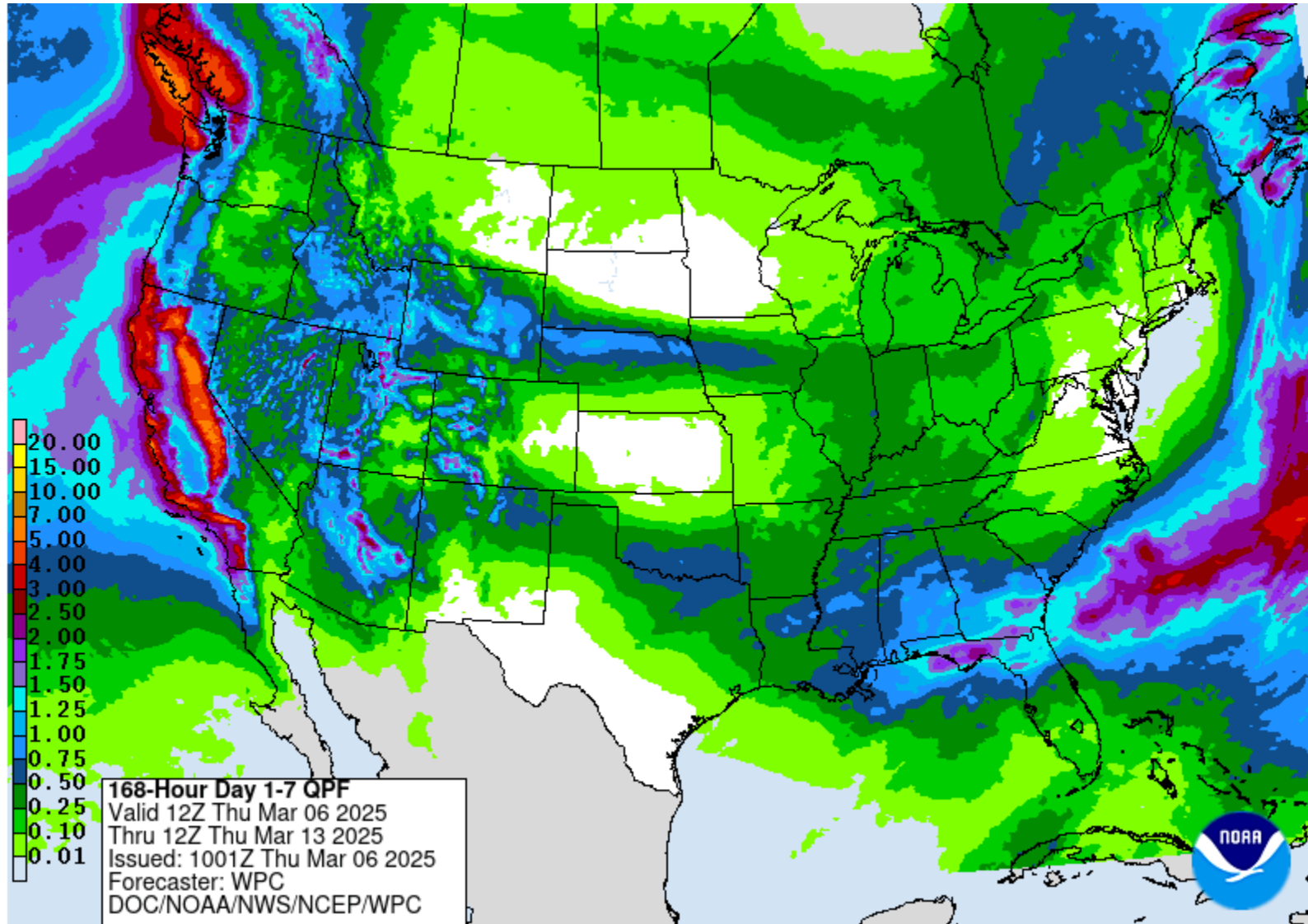
- Abnormal dryness and moderate drought cover ~ 49% of Missouri as we head into the growing season
- Wintertime precipitation did help to recharge soil moisture but there are still soil water deficits across the state
- The worst drought areas during Fall 2024 received below average precipitation over the Winter
- We still have residual impacts from three years of drought!

# Looking Ahead

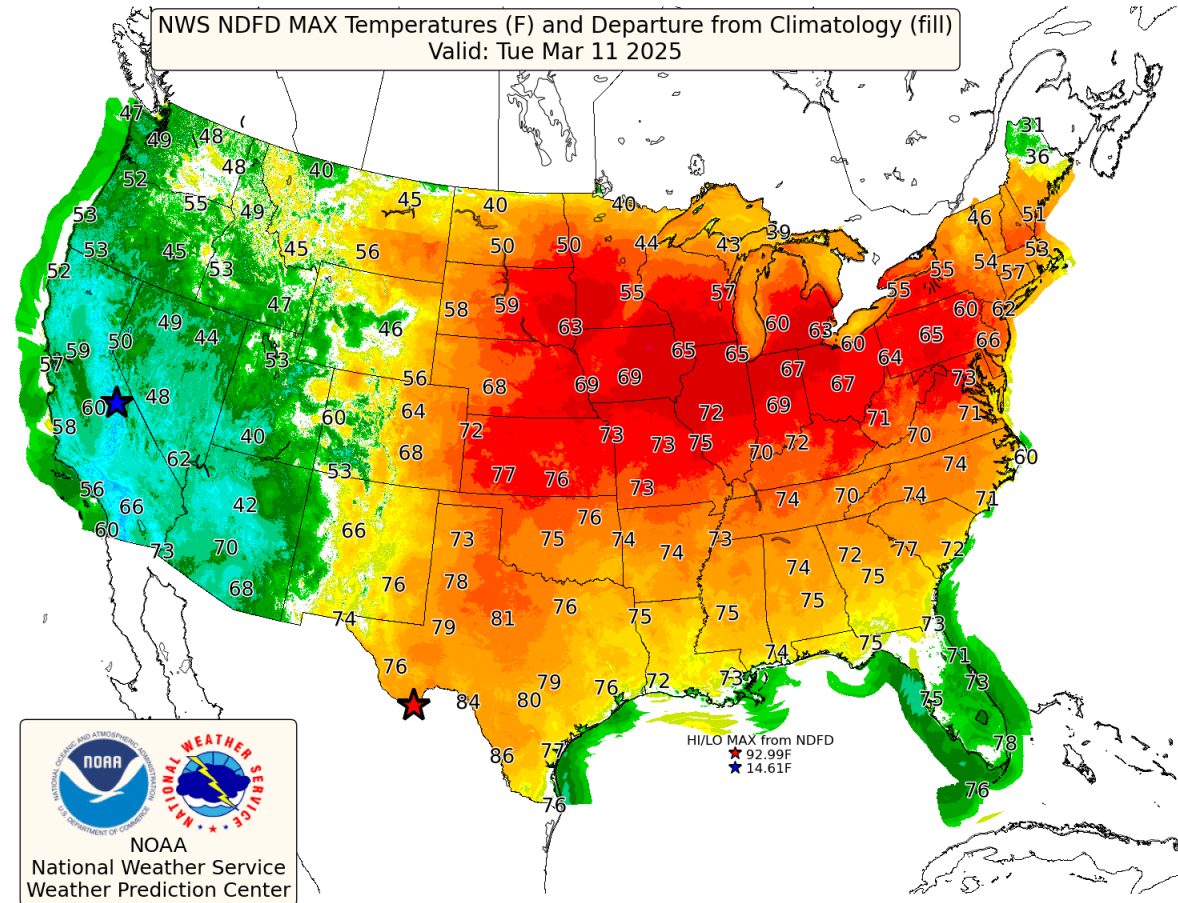
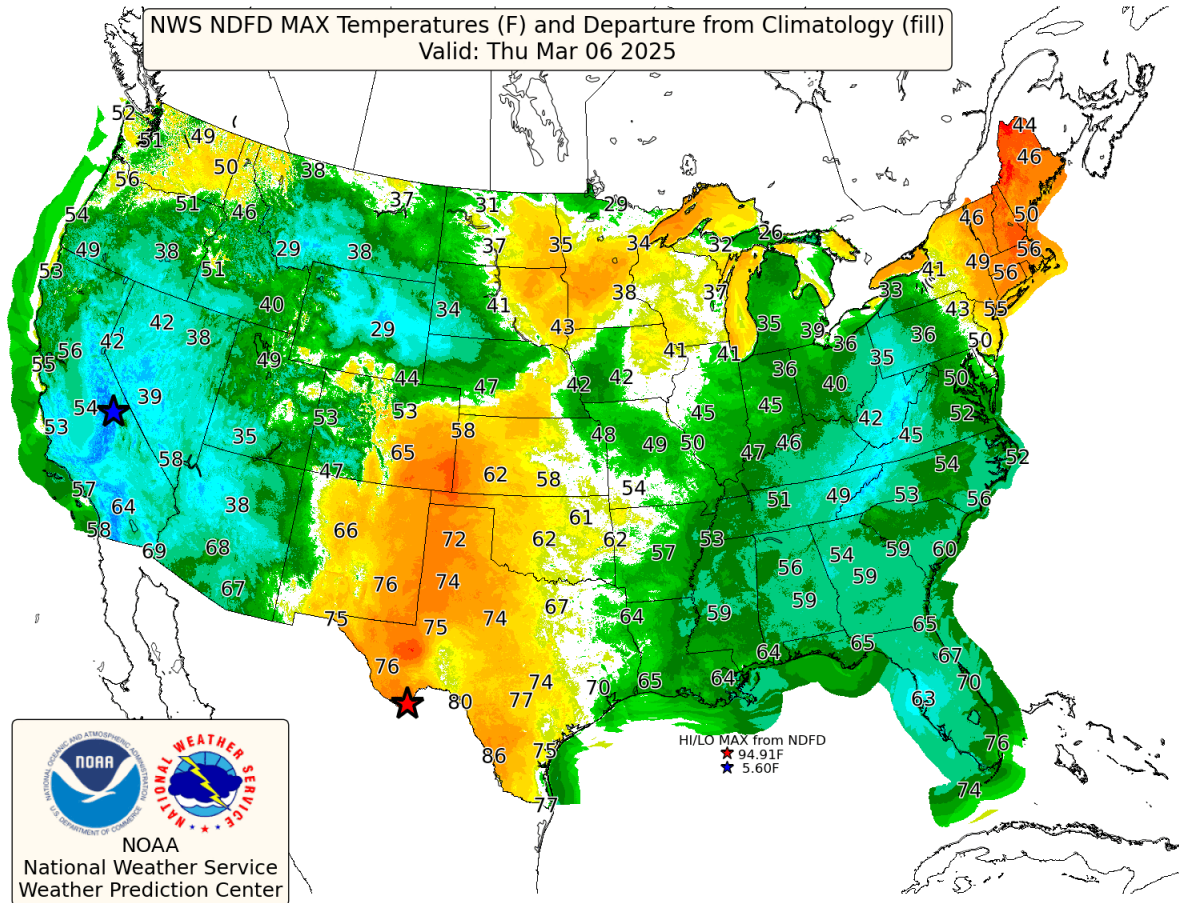


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# Looking Ahead



# Looking Ahead

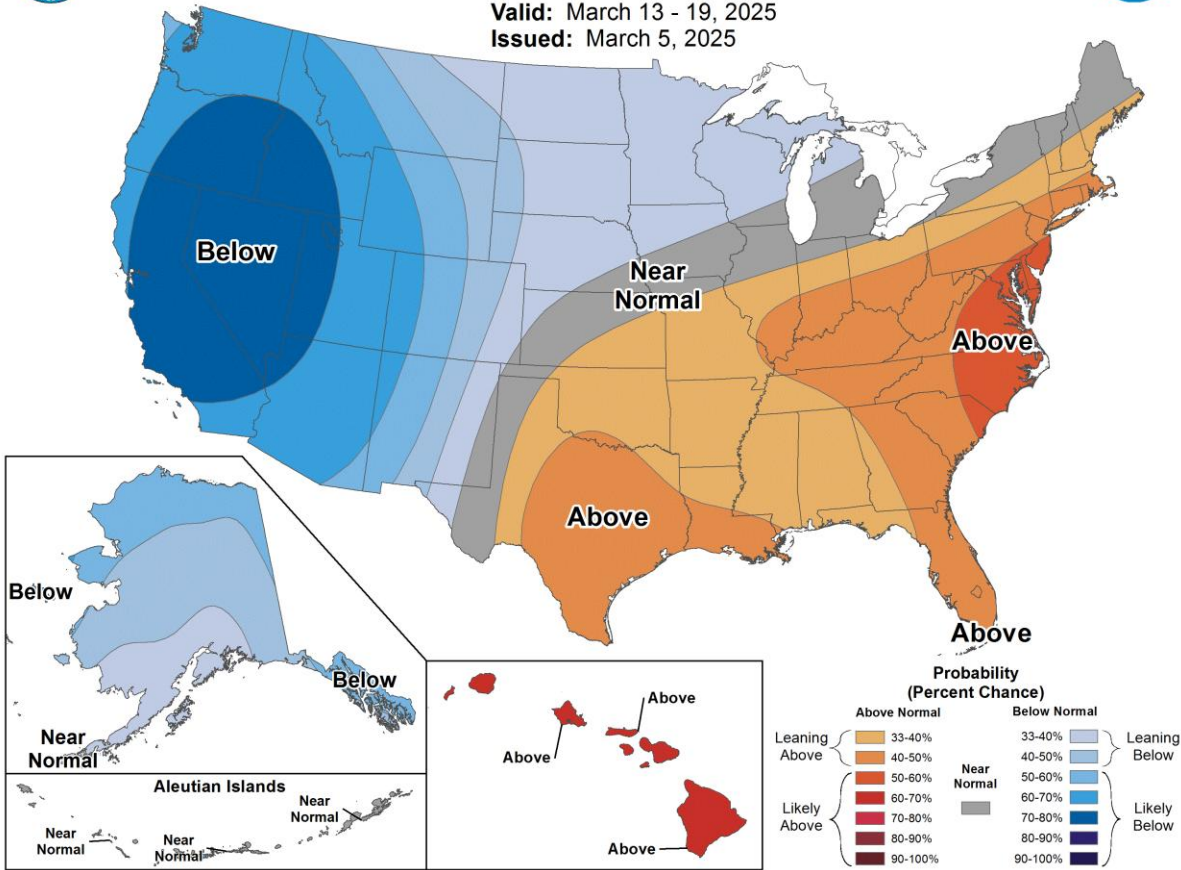


# Looking Ahead



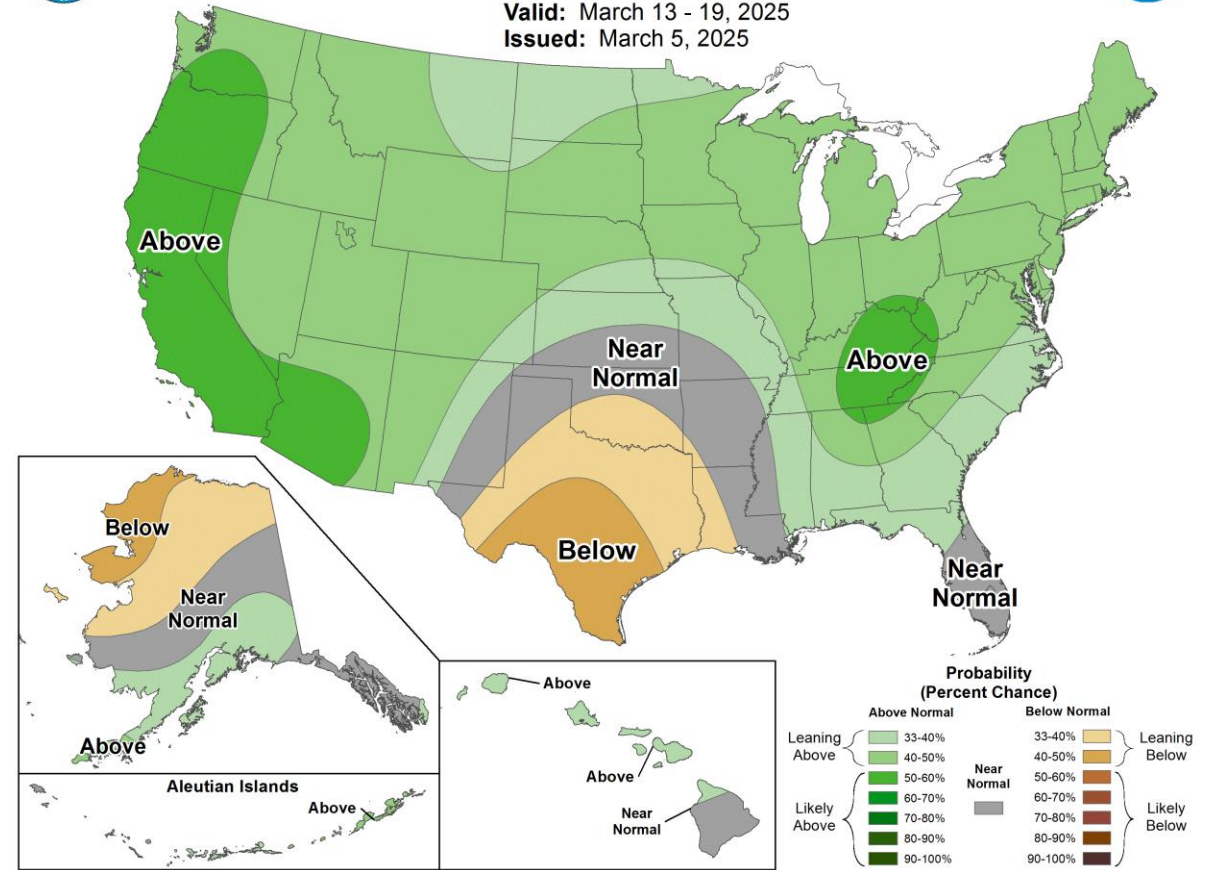
## 8-14 Day Temperature Outlook

Valid: March 13 - 19, 2025  
 Issued: March 5, 2025



## 8-14 Day Precipitation Outlook

Valid: March 13 - 19, 2025  
 Issued: March 5, 2025

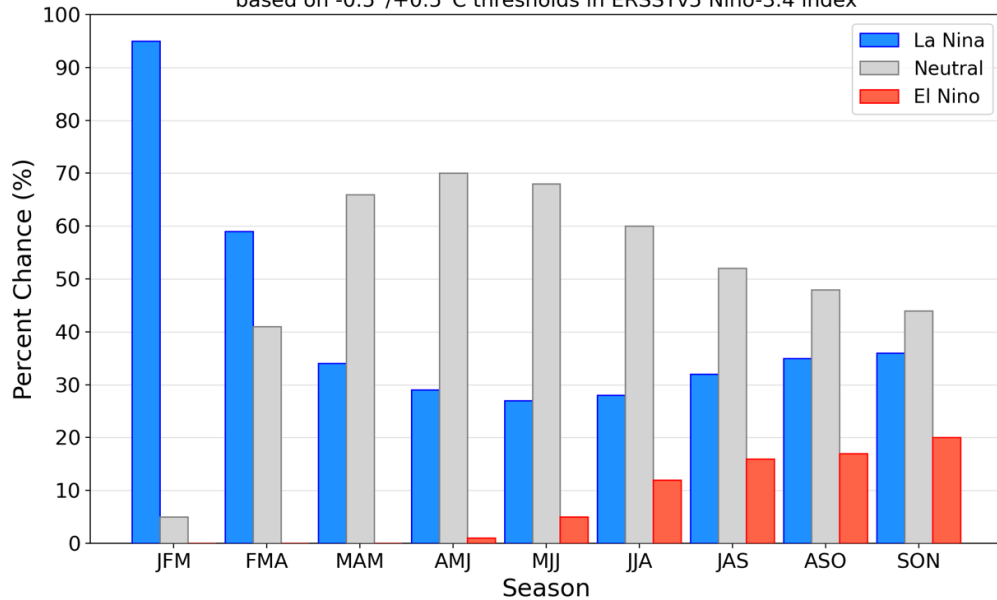


# Looking Ahead

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5	0.8	1.1	1.3	1.6	1.8	1.9	2.0
2024	1.8	1.5	1.1	0.7	0.4	0.2	0.0	-0.1	-0.2	-0.3	-0.4	-0.5
2025	-0.6											

## 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



ENSO Alert System Status: **La Niña Advisory**

La Niña conditions are present.\*

Equatorial sea surface temperatures (SSTs) are near-to-below average in the central and east-central Pacific Ocean. SSTs are above-average in the eastern Pacific Ocean.

La Niña conditions are expected to persist in the near-term, with a transition to ENSO-neutral likely during March-May 2025 (66% chance).

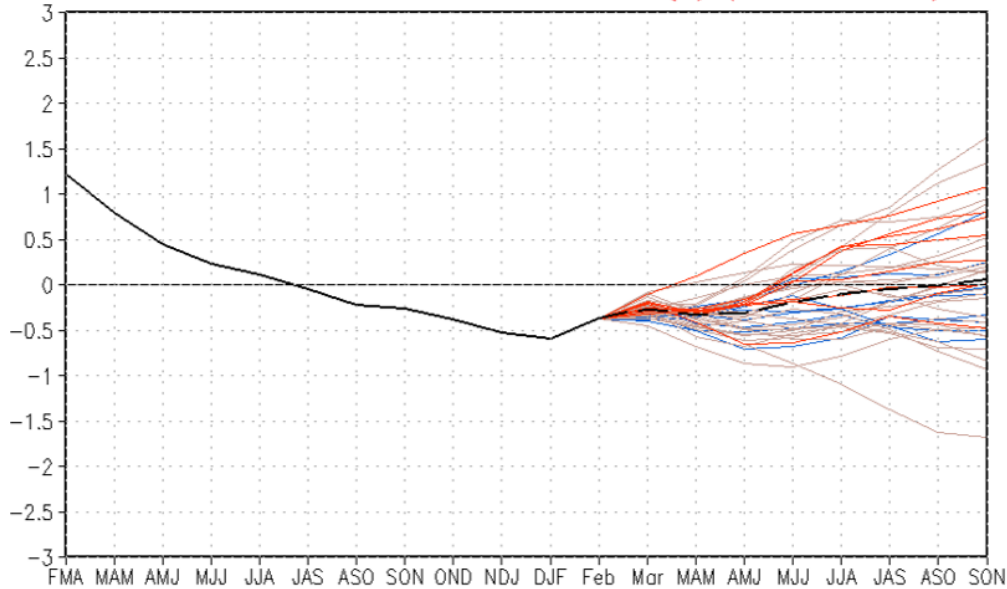


Update prepared by:  
Climate Prediction Center / NCEP  
3 March 2025

# Looking Ahead

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5	0.8	1.1	1.3	1.6	1.8	1.9	2.0
2024	1.8	1.5	1.1	0.7	0.4	0.2	0.0	-0.1	-0.2	-0.3	-0.4	-0.5
2025	-0.6											

CFSv2 forecast Nino3.4 SST anomalies (K) (PDF corrected)



— Latest 8 forecast members      — — — Forecast ensemble mean  
— Earliest 8 forecast members      — NCEP Olv2.1 daily analysis  
— Other forecast members  
 (Climatology base period: 1991–2020)

ENSO Alert System Status: **La Niña Advisory**

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Update prepared by:  
Climate Prediction Center / NCEP  
24 February 2025

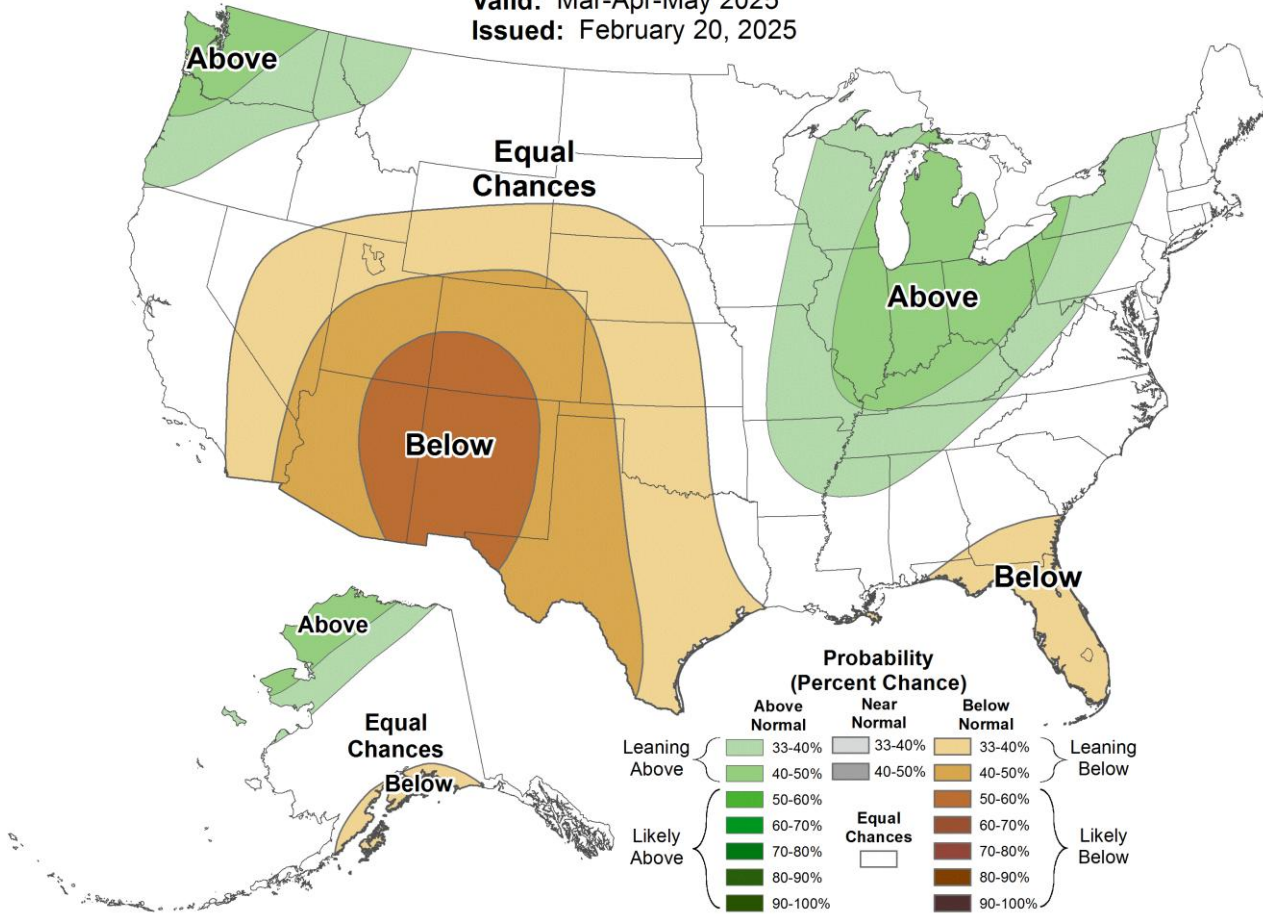
# Looking Ahead



## Seasonal Precipitation Outlook

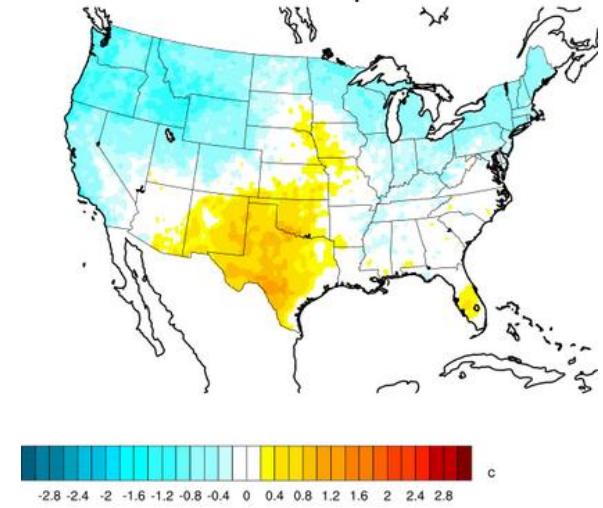


Valid: Mar-Apr-May 2025  
 Issued: February 20, 2025



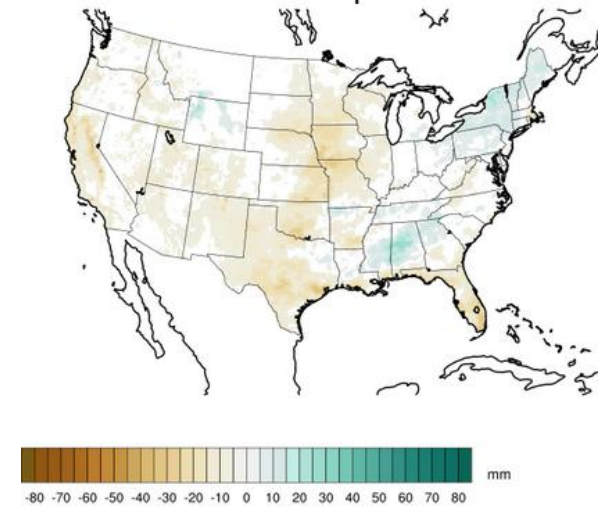
Mar-May Tmax Anomalies from NCEI's nclimGrid  
 1991-2020 climo

La Niña Composite



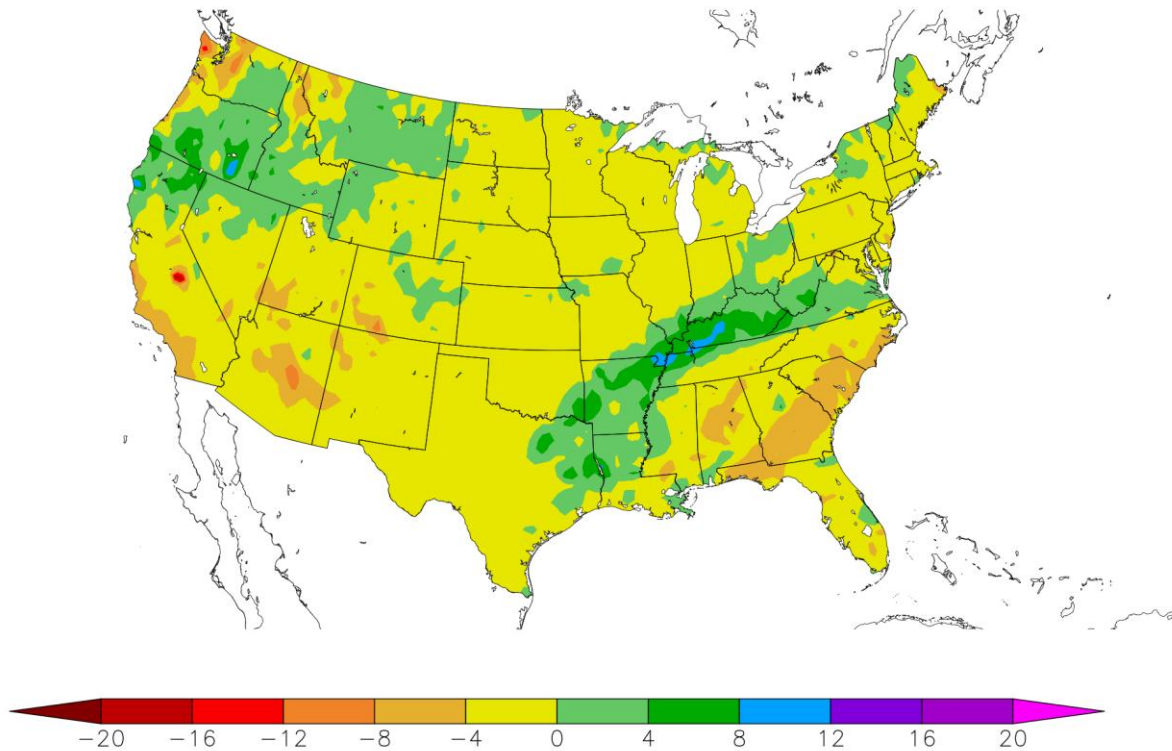
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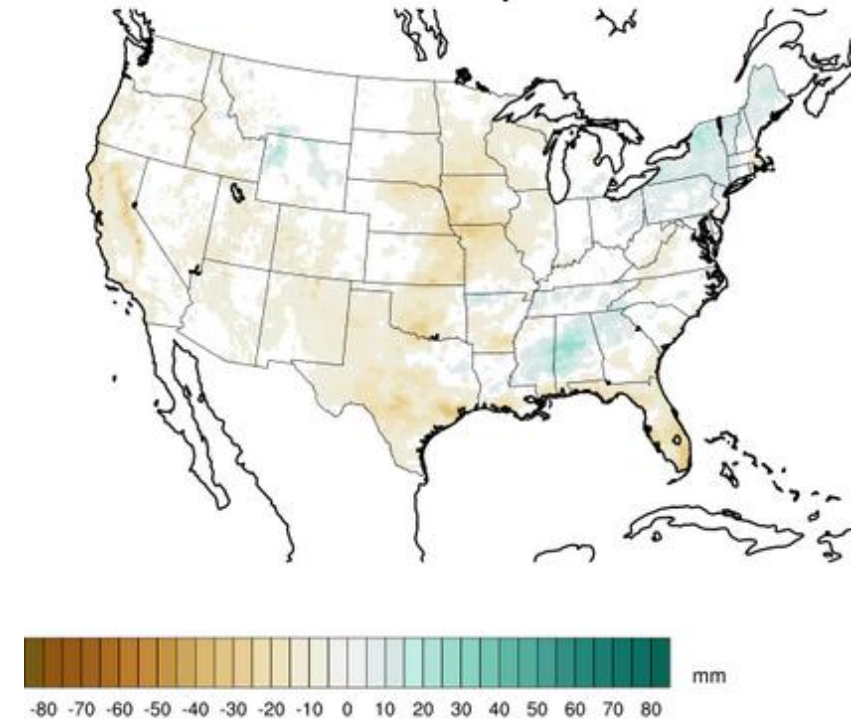
# Looking Ahead

Departure from Normal Precipitation (in)  
12/5/2024 – 3/4/2025



Mar-May Precipitation Anomalies from NCEI's nclimGrid  
1991-2020 climo

La Niña Composite



Generated 3/5/2025 at HPRCC using provisional data.

NOAA Regional Climate Centers

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

<https://psl.noaa.gov/enso/difference/>

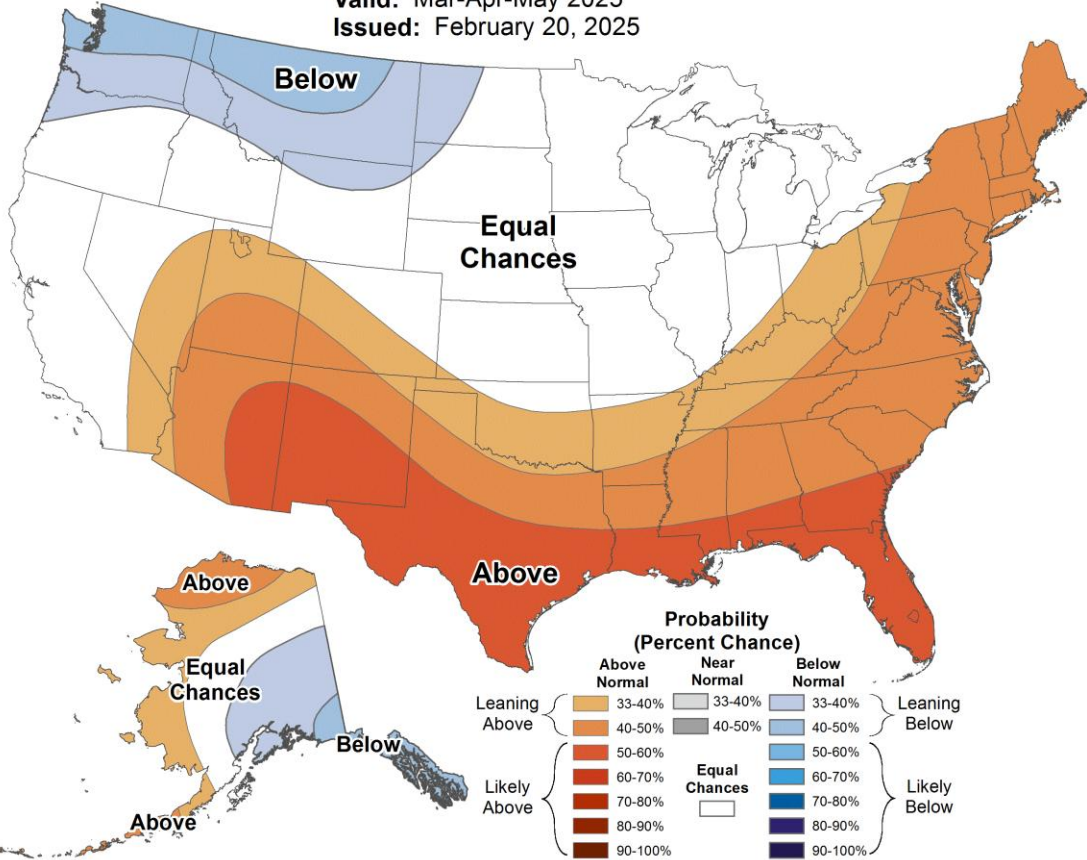
# Looking Ahead



## Seasonal Temperature Outlook



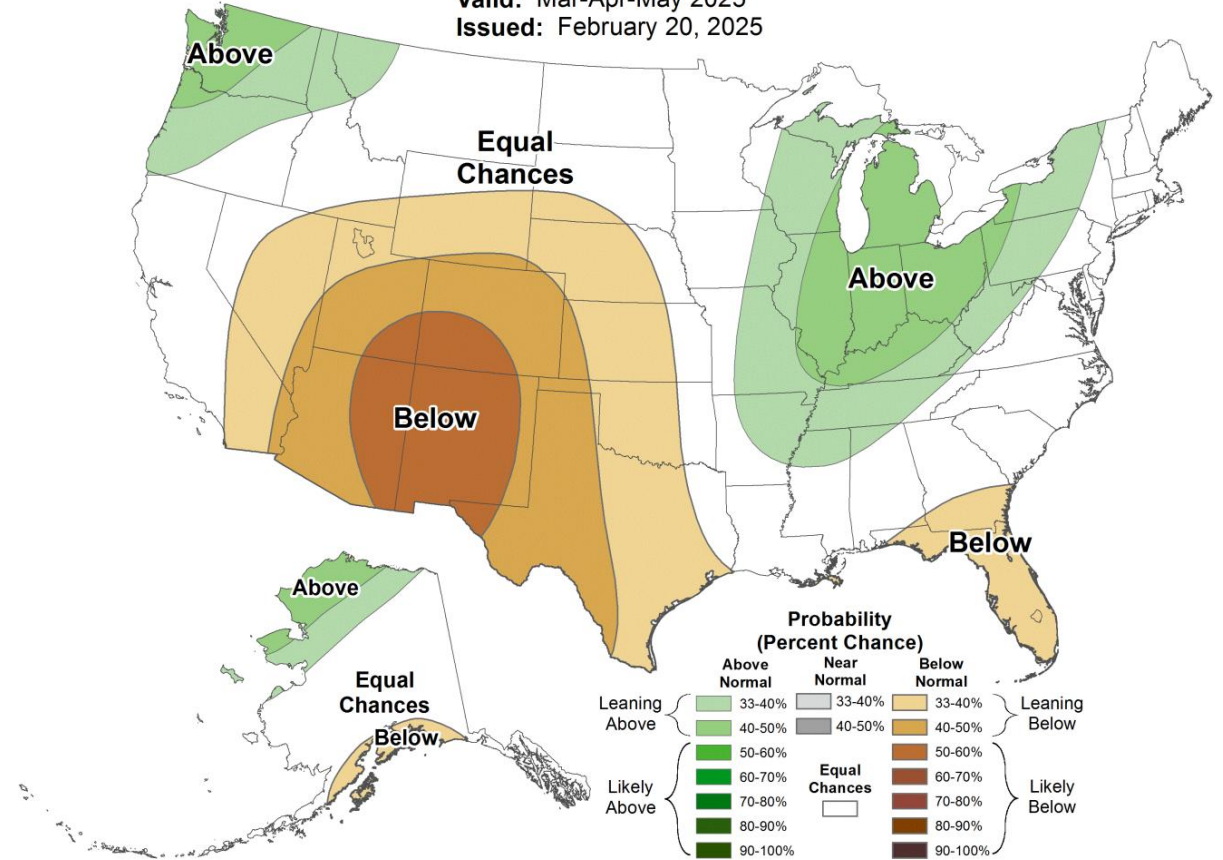
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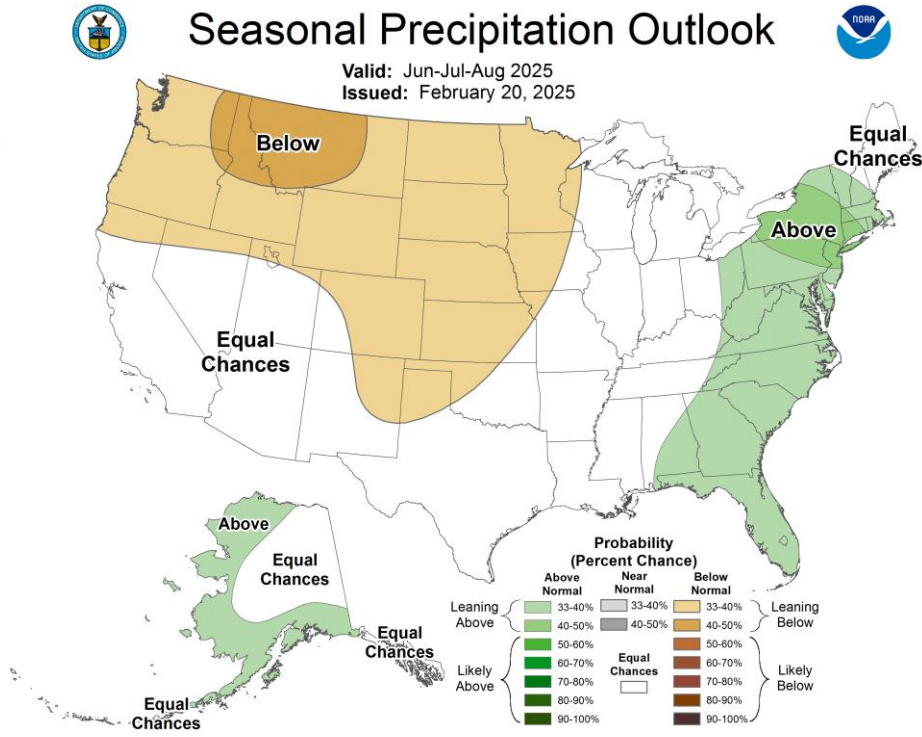
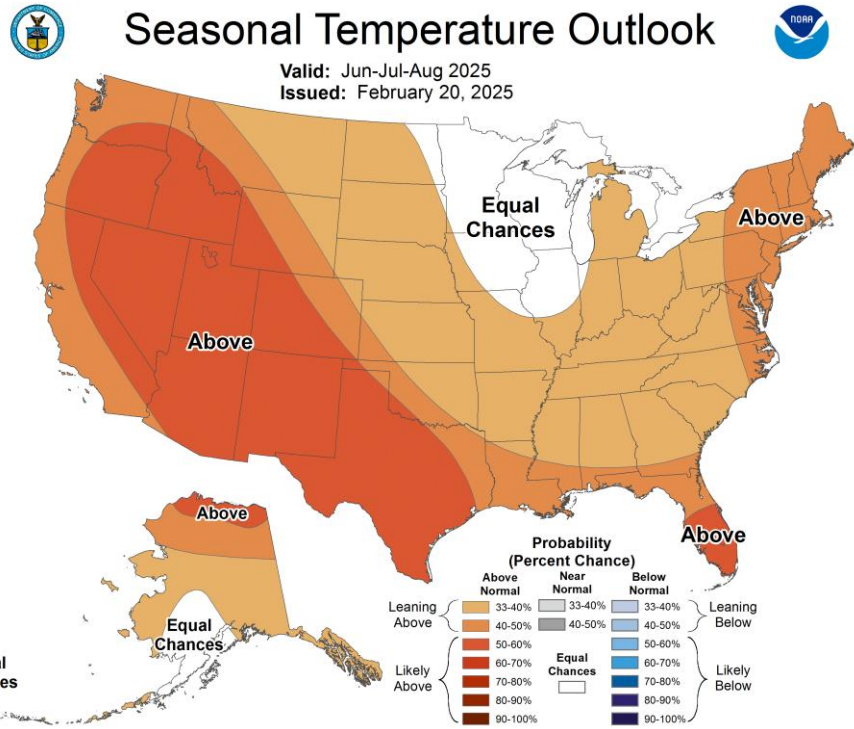
## Seasonal Precipitation Outlook



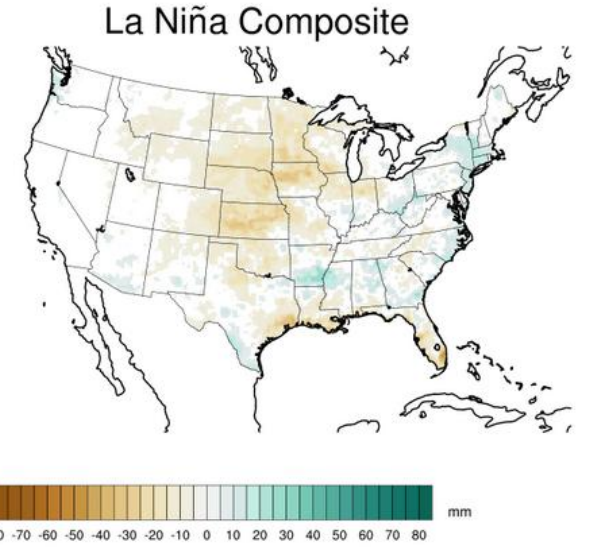
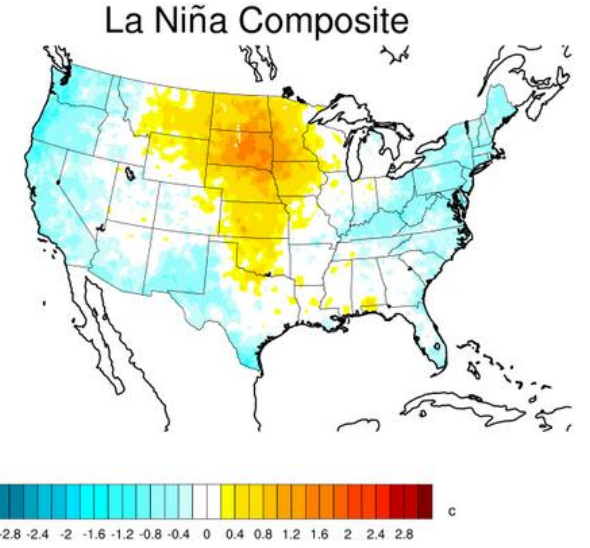
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Issued: February 20, 2025



# Looking Ahead



Jun-Aug Tmax Anomalies from NCEI's nclimGrid 1991-2020 climo



# Contact Information

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**W:** <http://climate.missouri.edu>

