



# DROUGHT CONDITIONS

## IN CENTRAL OKLAHOMA

John Harrington

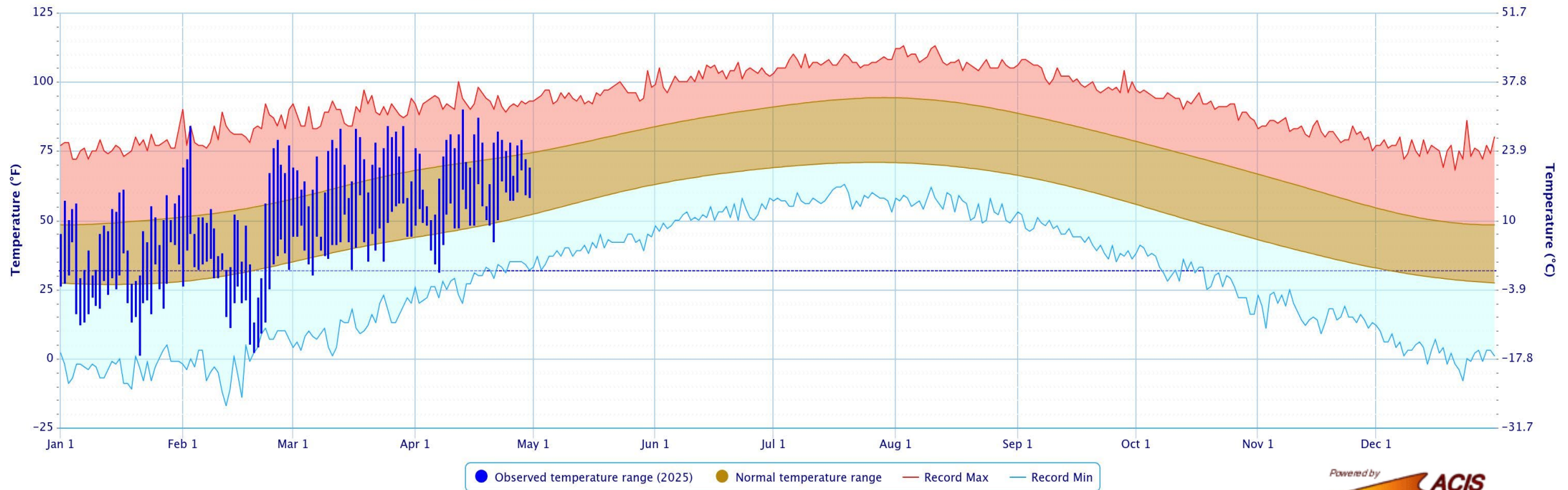
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May 2025

# TEMPERATURE PLOT FOR OKLAHOMA CITY, OKLAHOMA FOR 2025



Powered by  
NOAA Regional Climate Centers **ACIS** powered by ACIS

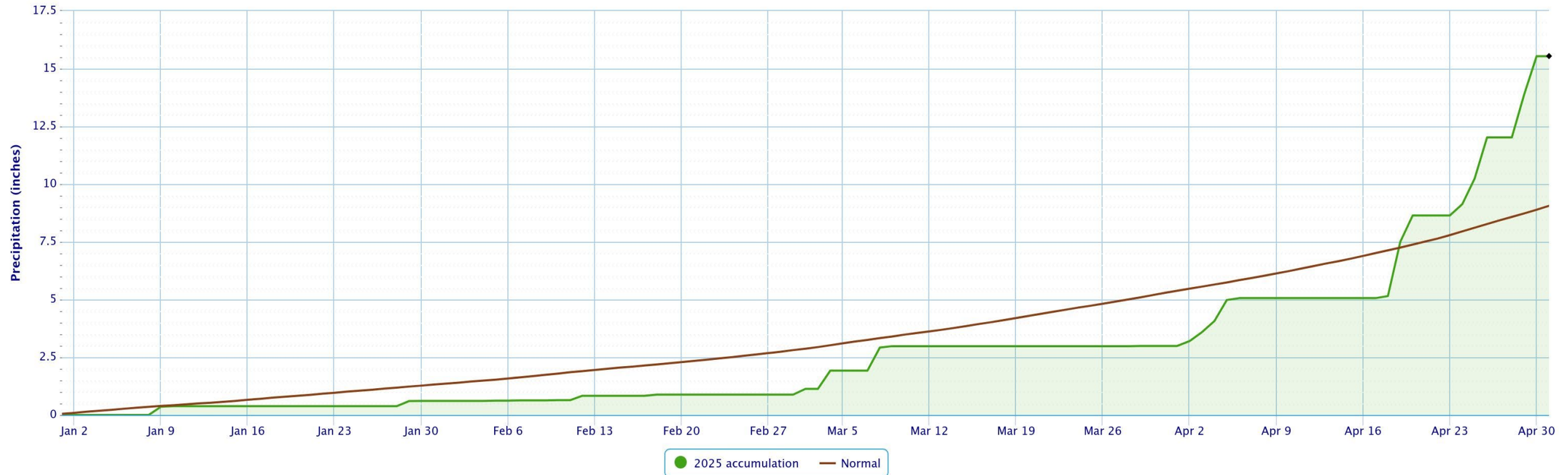


# PRECIPITATION PLOT FOR OKLAHOMA CITY, OKLAHOMA FOR 2025



Accumulated Precipitation – Oklahoma City Area, OK (ThreadEx)

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Powered by ACIS



# RAINFALL SUMMARIES BY OKLAHOMA CLIMATE DIVISION



Calendar Year 01-Jan-2024 through 30-Apr-2025

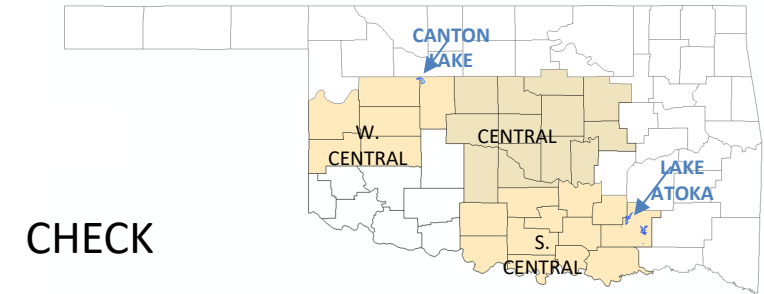
Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	8.24"	+1.50"	122%	22nd wettest	0.66"	13.07"
Central	13.83"	+4.11"	142%	8th wettest	1.39"	20.88"
S. Central	17.11"	+5.62"	149%	8th wettest	3.40"	27.44"
Statewide	12.61"	+2.95"	131%	13th wettest	2.30"	18.72"

Water Year: 01-Oct-2023 through 30-Apr-2025

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	16.74"	+4.46"	136%	8th wettest	2.92"	20.83"
Central	24.41"	+6.58"	137%	8th wettest	8.01"	33.73"
S. Central	27.61"	+6.43"	130%	15th wettest	7.81"	36.02"
Statewide	22.82"	+5.08"	129%	9th wettest	8.13"	28.60"

Spring March 01 through 30-Apr-2025

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	7.70"	+3.03"	165%	11th wettest	0.41"	10.33"
Central	12.74"	+6.25"	196%	2nd wettest	0.77"	14.66"
S. Central	14.83"	+7.68"	207%	3rd wettest	2.07"	18.53"
Statewide	10.74"	+4.47"	171%	5th wettest	1.52"	12.30"



CHECK



The climate divisions shown include statewide totals, central Oklahoma totals, and totals for the two divisions which have Canton Lake and Lake Atoka—major water sources for central Oklahoma.



# NOAA ONE-MONTH TEMPERATURE OUTLOOK



White areas are shown as EC (Equal Chance) on these maps represent areas where there are no strong climate signals from the climate tools to have skill in preferring one category over another.

That doesn't mean that there are equal chances of each of the categories occurring – it means that currently there is no skill in identifying the most likely category. In these areas, it is best to be prepared for all possibilities.

[Climate Prediction Center - Updated OFFICIAL 30-Day Forecasts \(noaa.gov\)/](https://www.noaa.gov/climate-prediction-center)

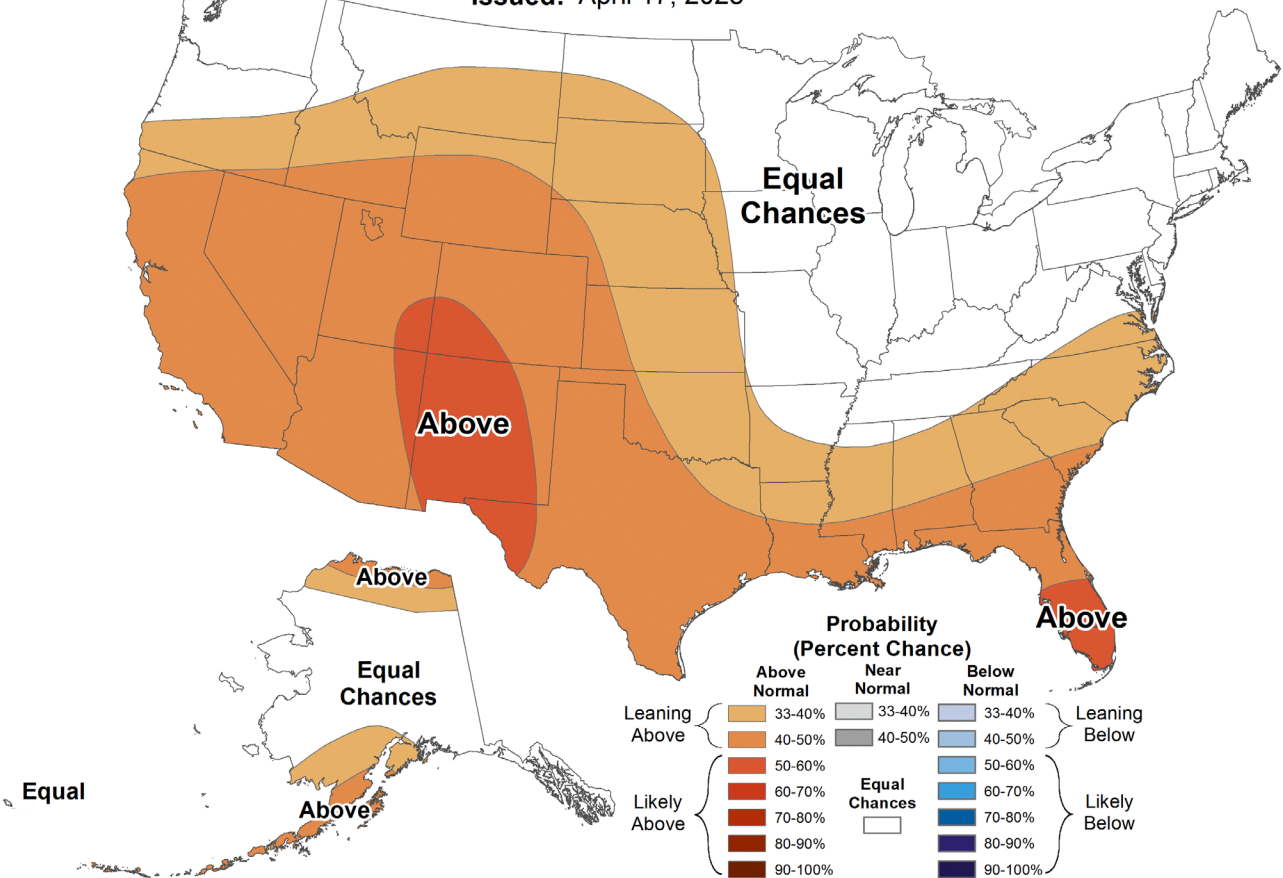


## Monthly Temperature Outlook



Valid: May 2025

Issued: April 17, 2025



# NOAA ONE-MONTH PRECIPITATION OUTLOOK



White areas are shown as EC (Equal Chance) on these maps represent areas where there are no strong climate signals from the climate tools to have skill in preferring one category over another.

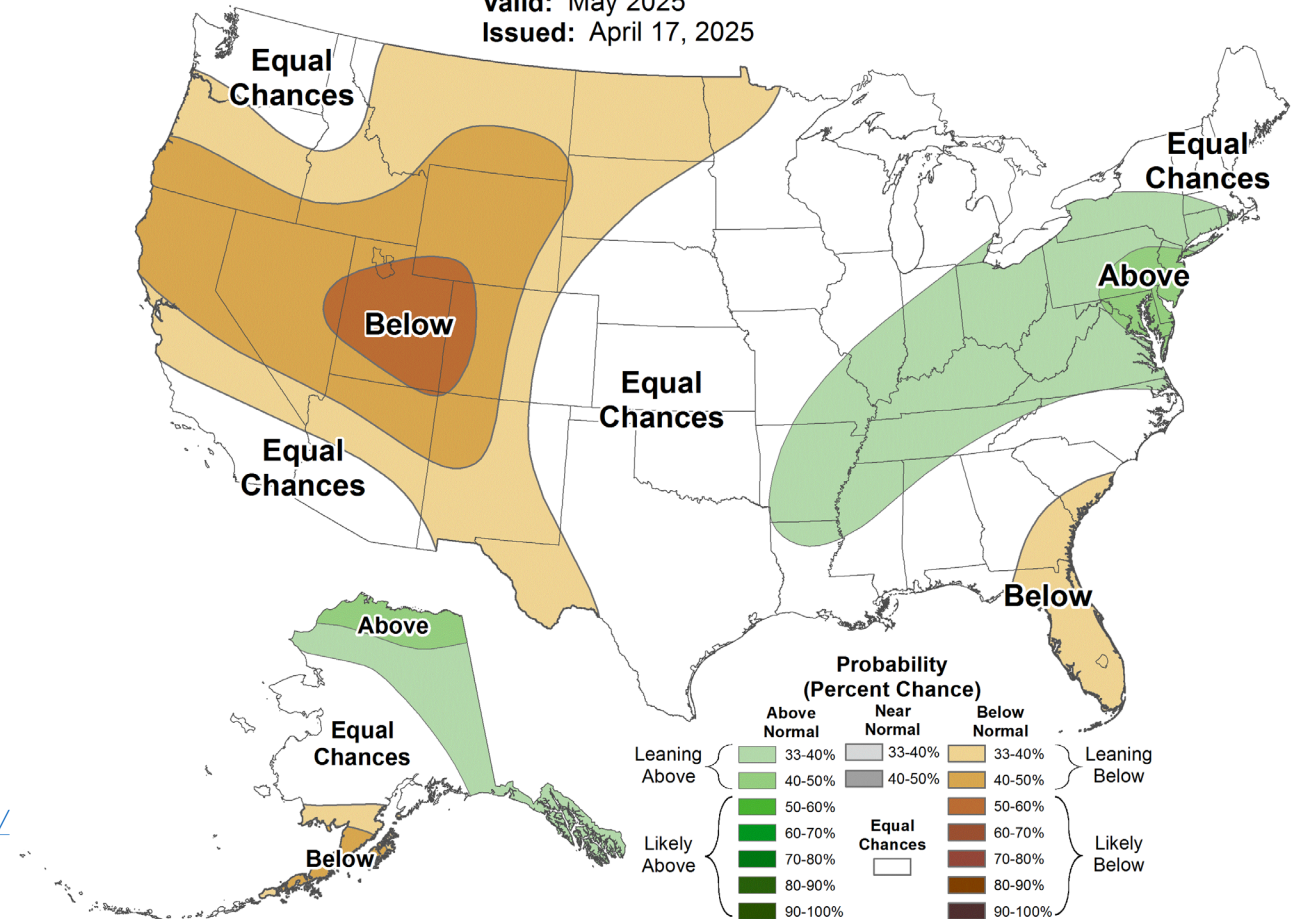
That doesn't mean that there are equal chances of each of the categories occurring – it means that currently there is no skill in identifying the most likely category. In these areas, it is best to be prepared for all possibilities.

[Climate Prediction Center - Updated OFFICIAL 30-Day Forecasts \(noaa.gov\)/](https://www.noaa.gov/climate-prediction-center)

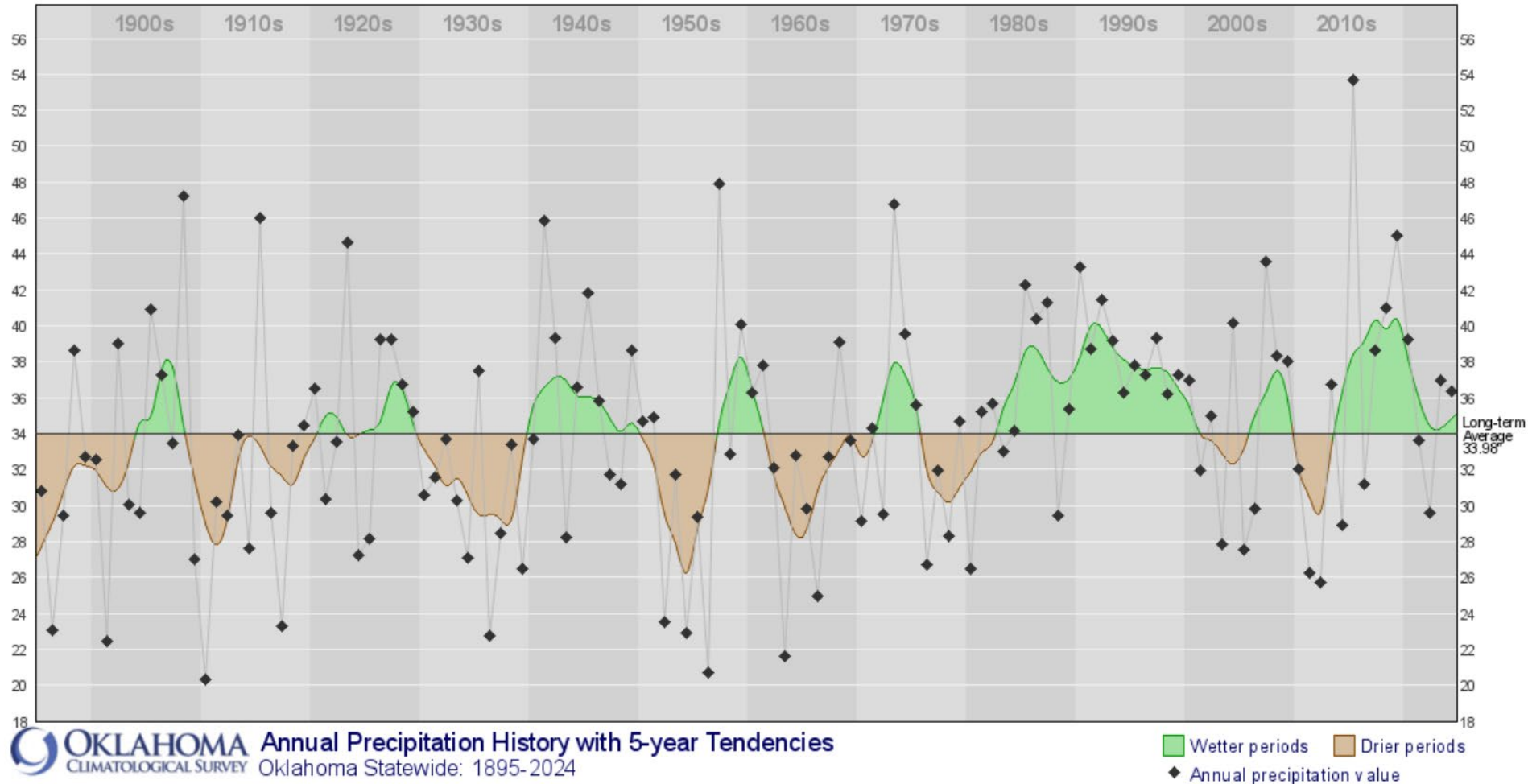


## Monthly Precipitation Outlook

Valid: May 2025  
Issued: April 17, 2025



# Annual Precipitation History with 5-Year Tendencies



This graph shows the cyclical nature of wet and drought periods in Oklahoma. The black dots represent the annual precipitation for that particular year. The line represents the annual precipitation data smoothed over five years.

This smoothed line shows well the wet periods (shaded green) and the drought periods (shaded brown). The drought cycles appear to average about five to eight years in length.



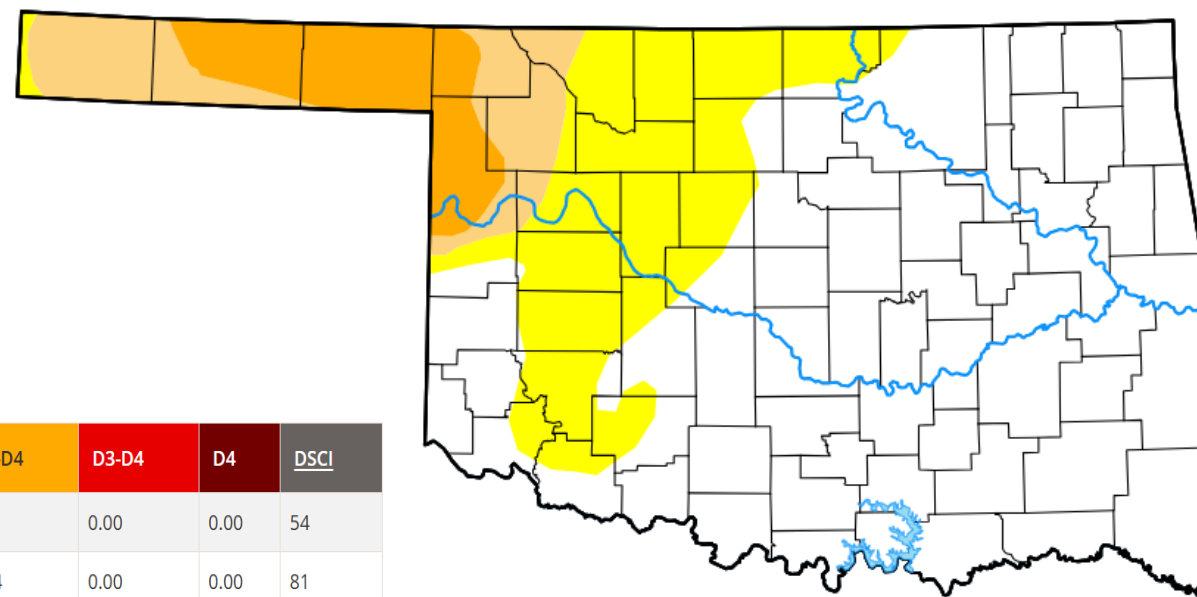
# U.S. DROUGHT MONITOR - OKLAHOMA



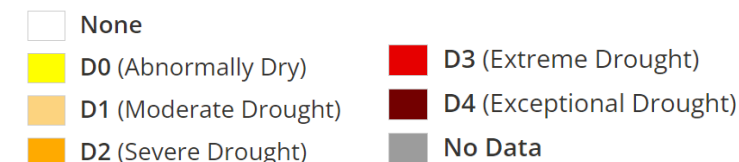
May 1, 2025

Abnormal dryness or drought is currently affecting approximately 58,353 people in Oklahoma.

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	<a href="#">2025-04-29</a>	66.86	33.14	14.14	6.91	0.00	0.00	54
Last Week to Current	<a href="#">2025-04-22</a>	54.00	46.00	32.02	2.74	0.00	0.00	81
3 Months Ago to Current	<a href="#">2025-01-28</a>	73.89	26.11	5.24	0.33	0.00	0.00	32
Start of Calendar Year to Current	<a href="#">2024-12-31</a>	70.28	29.72	5.52	0.33	0.00	0.00	36
Start of Water Year to Current	<a href="#">2024-10-01</a>	22.82	77.18	61.31	37.39	11.50	0.00	187
One Year Ago to Current	<a href="#">2024-04-30</a>	41.10	58.90	28.10	9.12	0.00	0.00	96



## Intensity



# U.S. DROUGHT MONITOR NATIONWIDE MAP



Map released: May 1, 2025

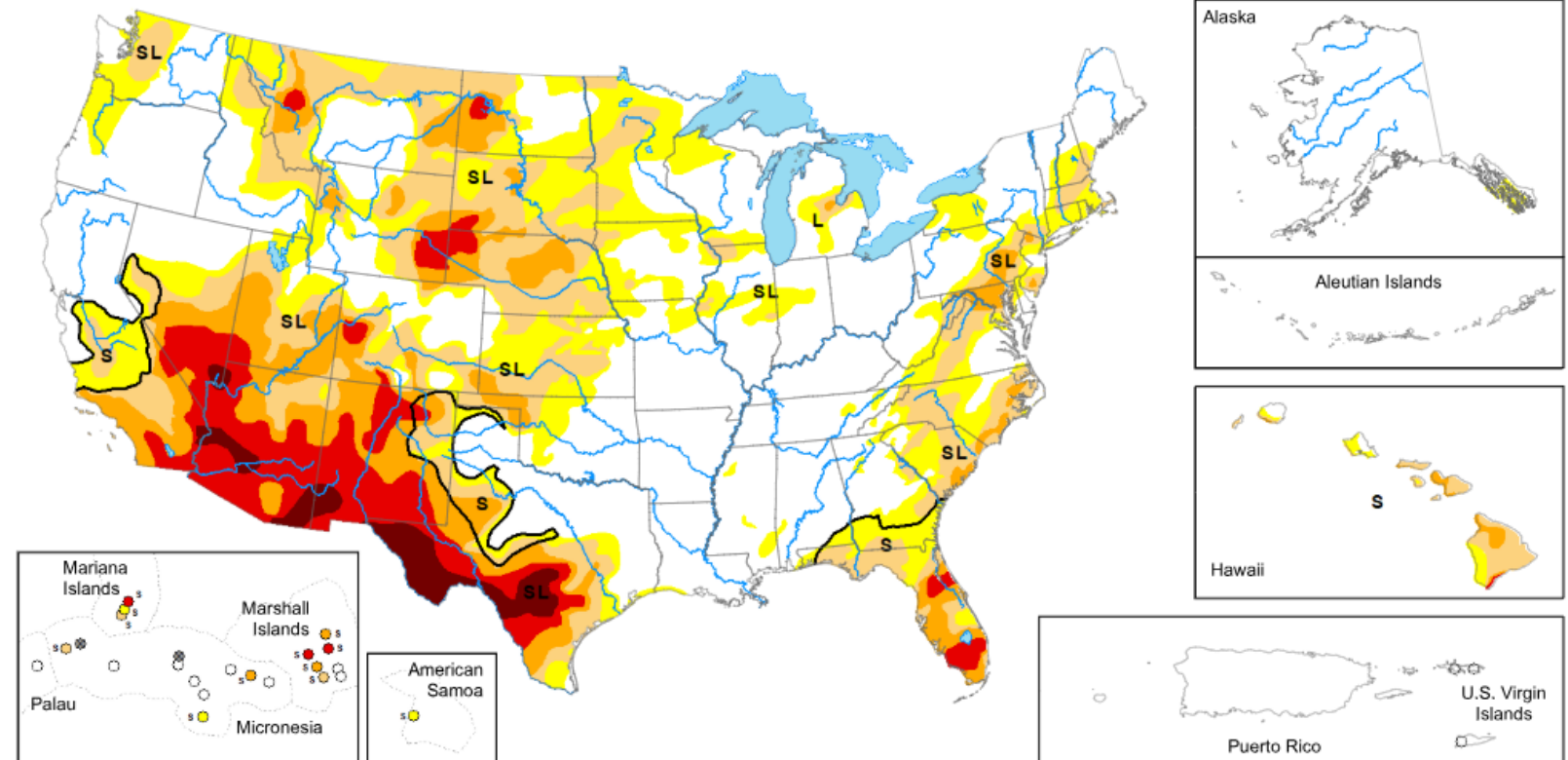
Data valid: April 29, 2025

## Intensity and Impacts



United States and Puerto Rico Author(s):  
*Deborah Bathke*, National Drought Mitigation Center

Pacific Islands and Virgin Islands Author(s):  
*Ahira Sanchez-Lugo*, NOAA/NCEI

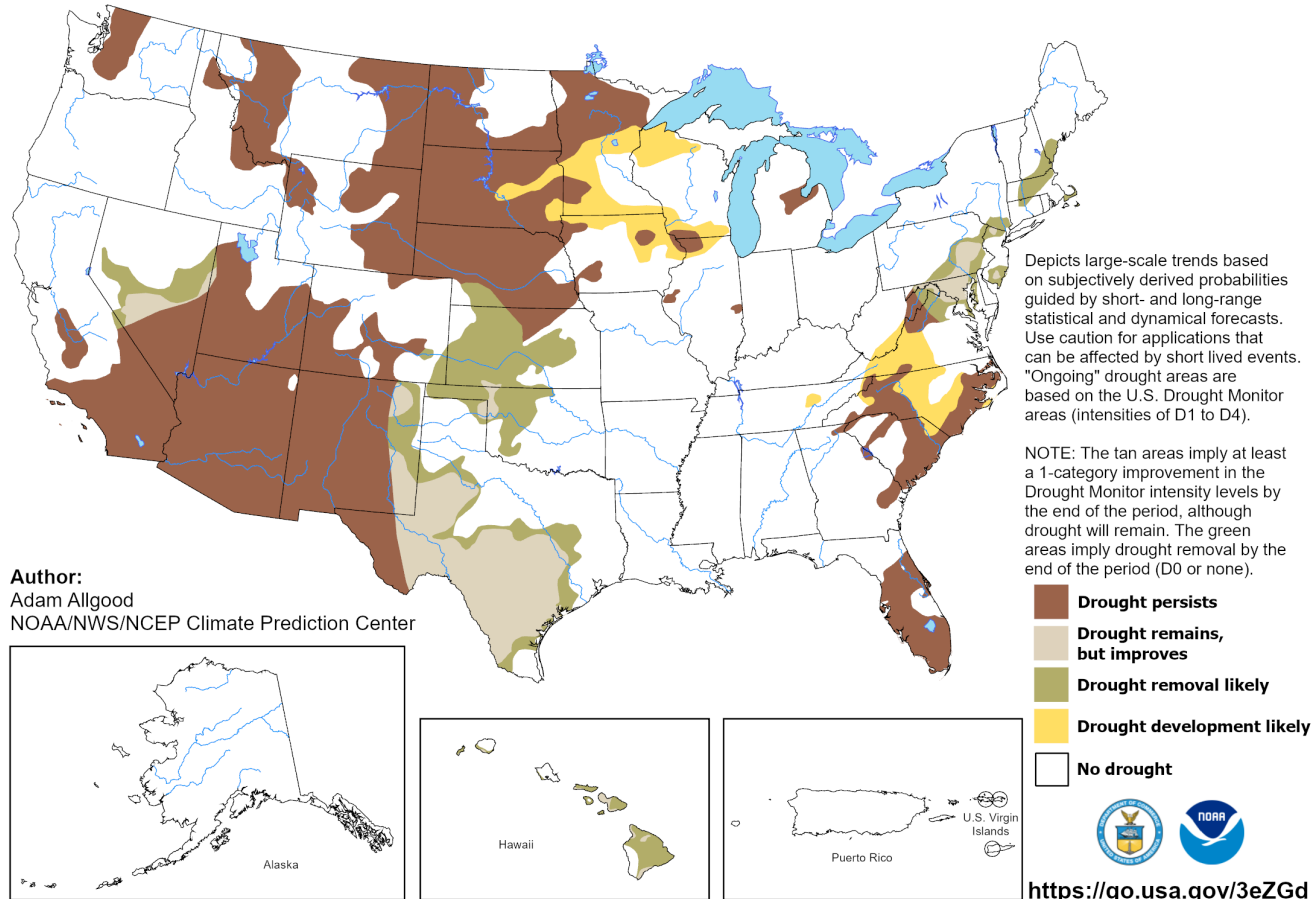


# U.S. DROUGHT MONITOR MONTHLY DROUGHT OUTLOOK MAP



## U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for May 2025  
Released April 30, 2025



Depicts large-scale trends based on subjectively derived probabilities guided by short and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

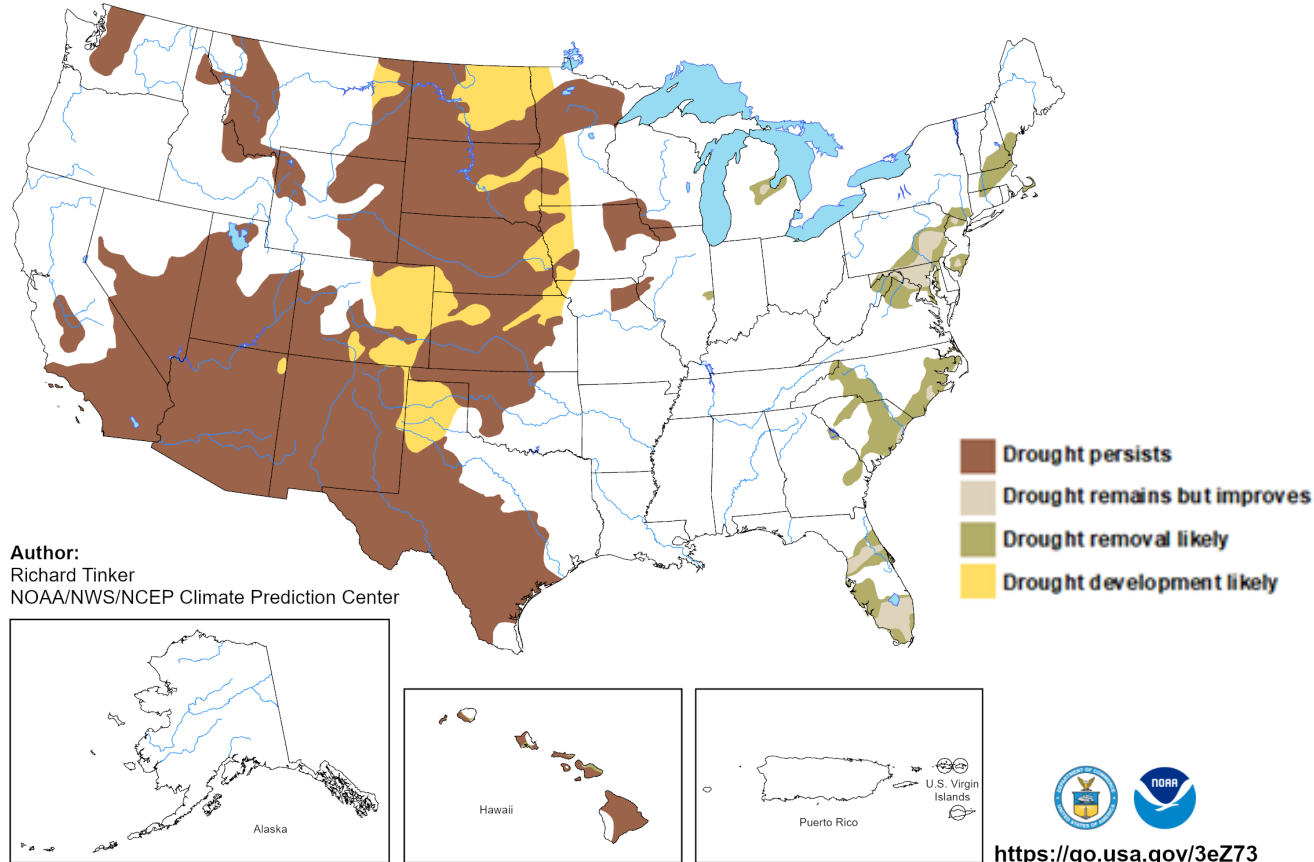


# U.S. DROUGHT MONITOR SEASONAL DROUGHT OUTLOOK MAP



## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for April 17 - July 31, 2025  
Released April 17, 2025



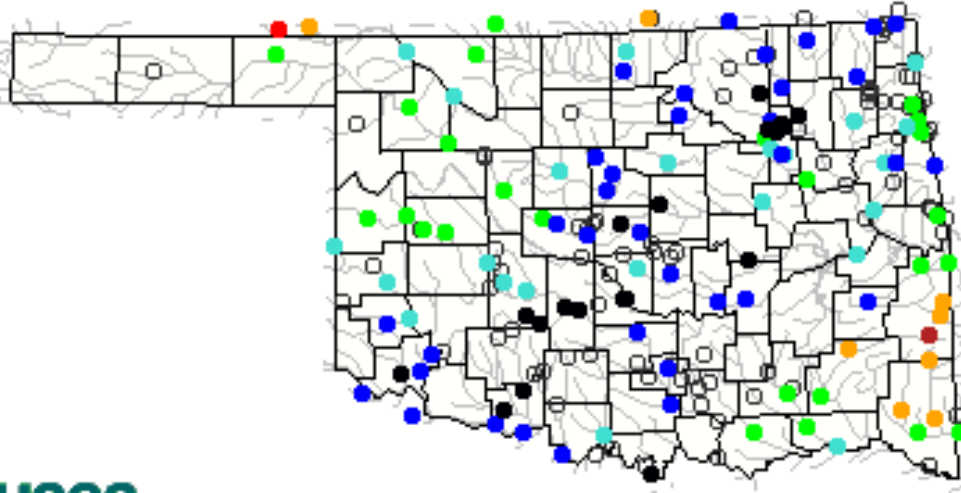
Depicts large-scale trends based on subjectively derived probabilities guided by short and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. “Ongoing” drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

# USGS STREAMFLOW DATA



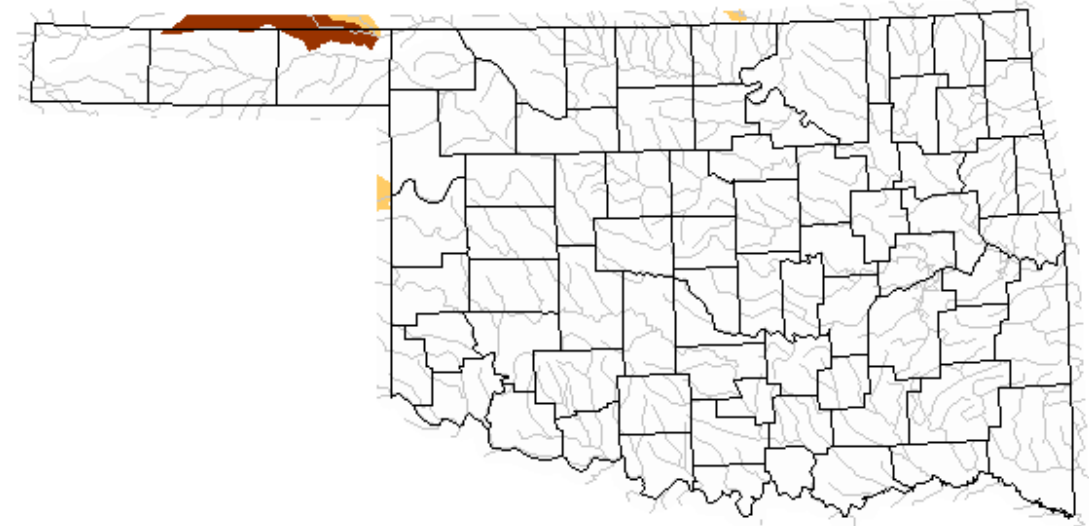
Wednesday, April 30, 2025 10:30ET



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

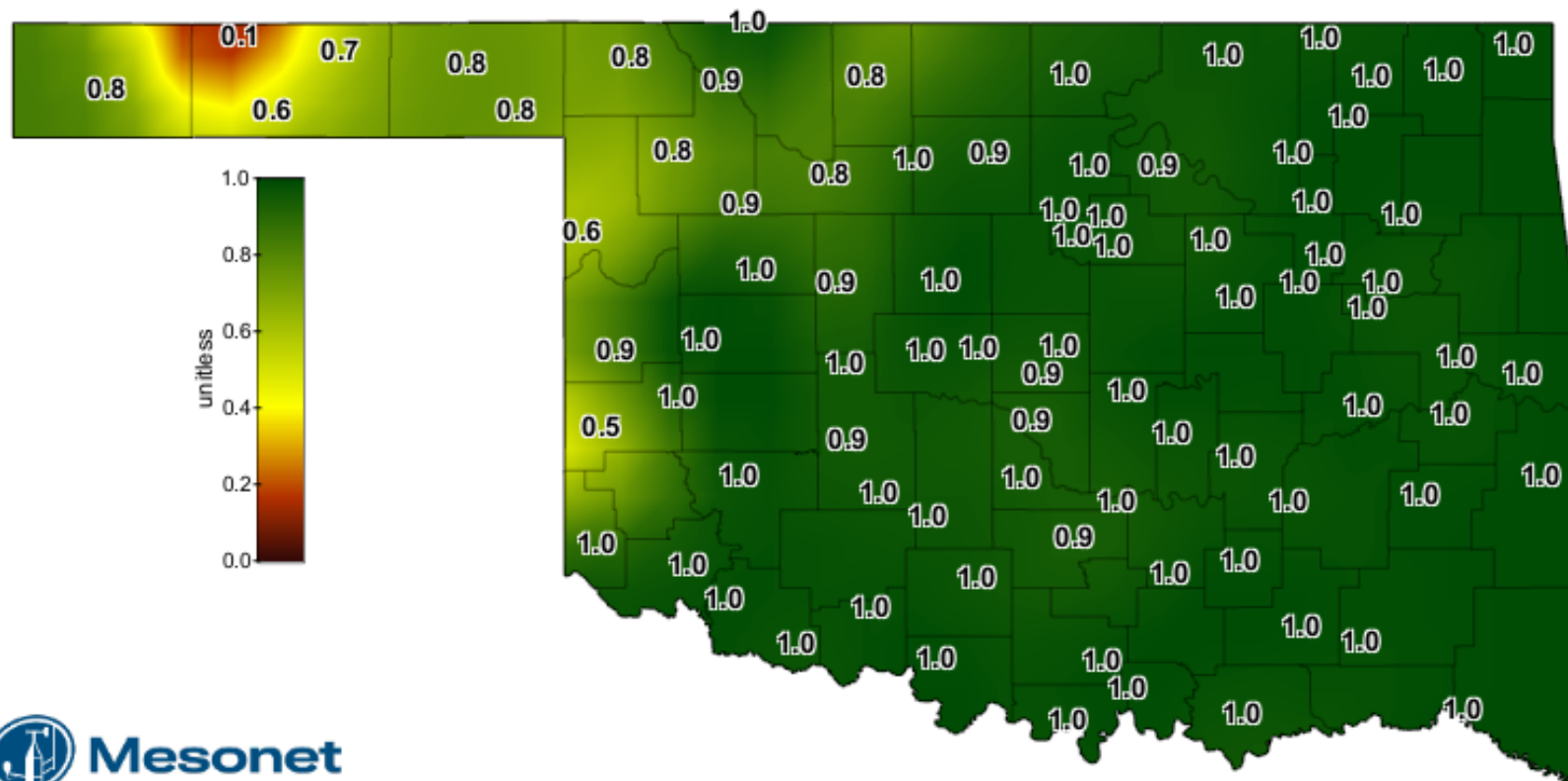
Below normal 28-day average streamflow

Tuesday, April 29, 2025



Explanation - Percentile classes				
Low	<=5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

# SOIL MOISTURE MAP



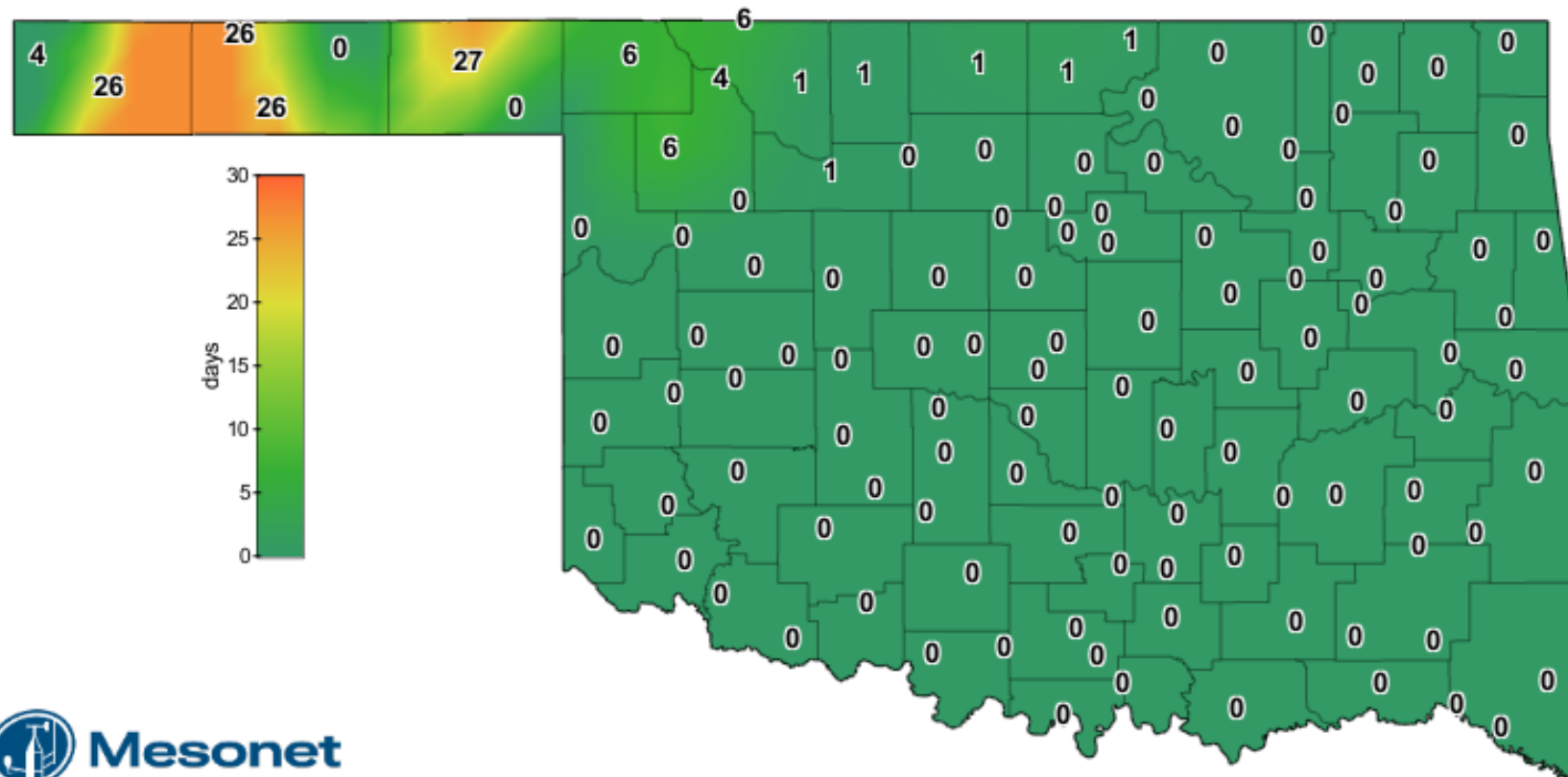
1-day Average 24-inch Fractional Water Index

April 30, 2025

Created 7:30:14 AM May 1, 2025 CDT. © Copyright 2025



# CONSECUTIVE DAYS WITHOUT RAINFALL MAP



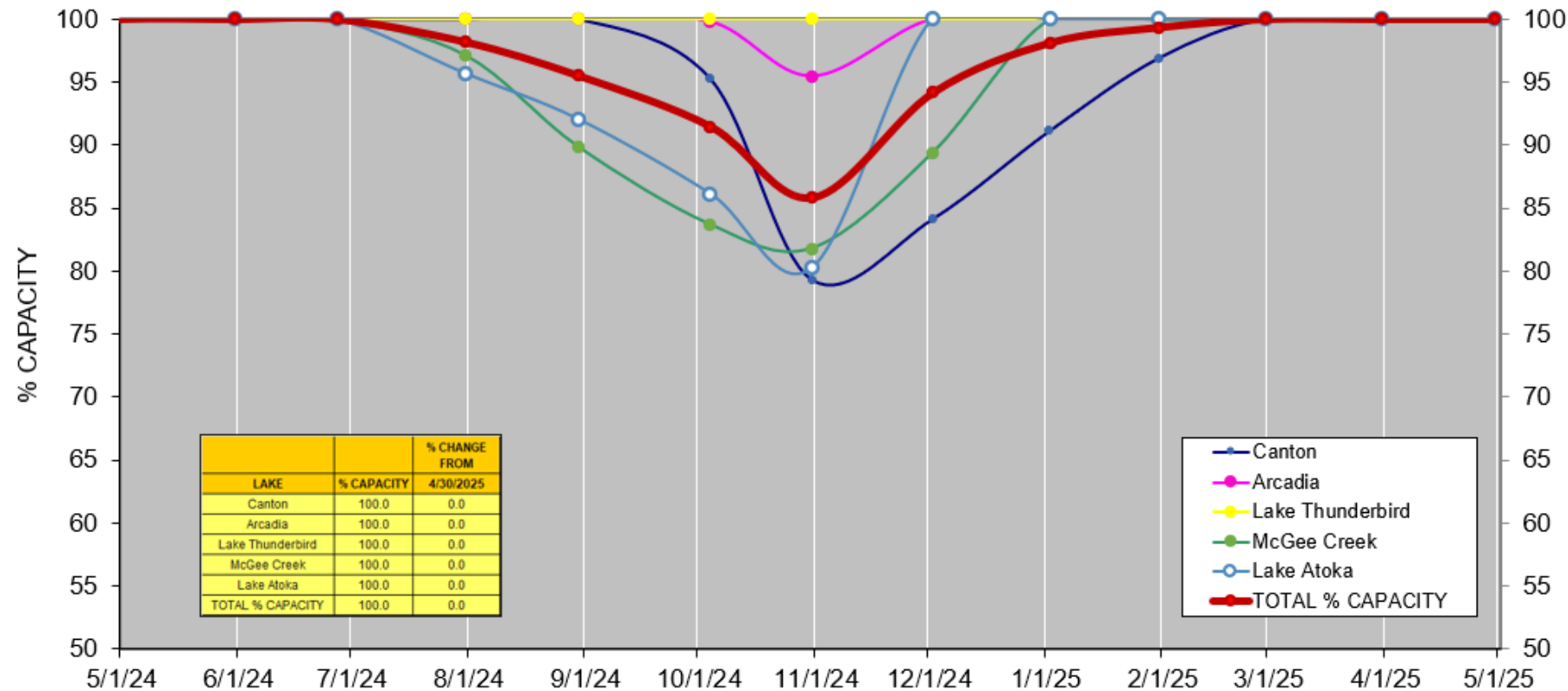
**Mesonet**

**Consecutive Days With Less Than 0.25" Rainfall**

**April 30, 2025**

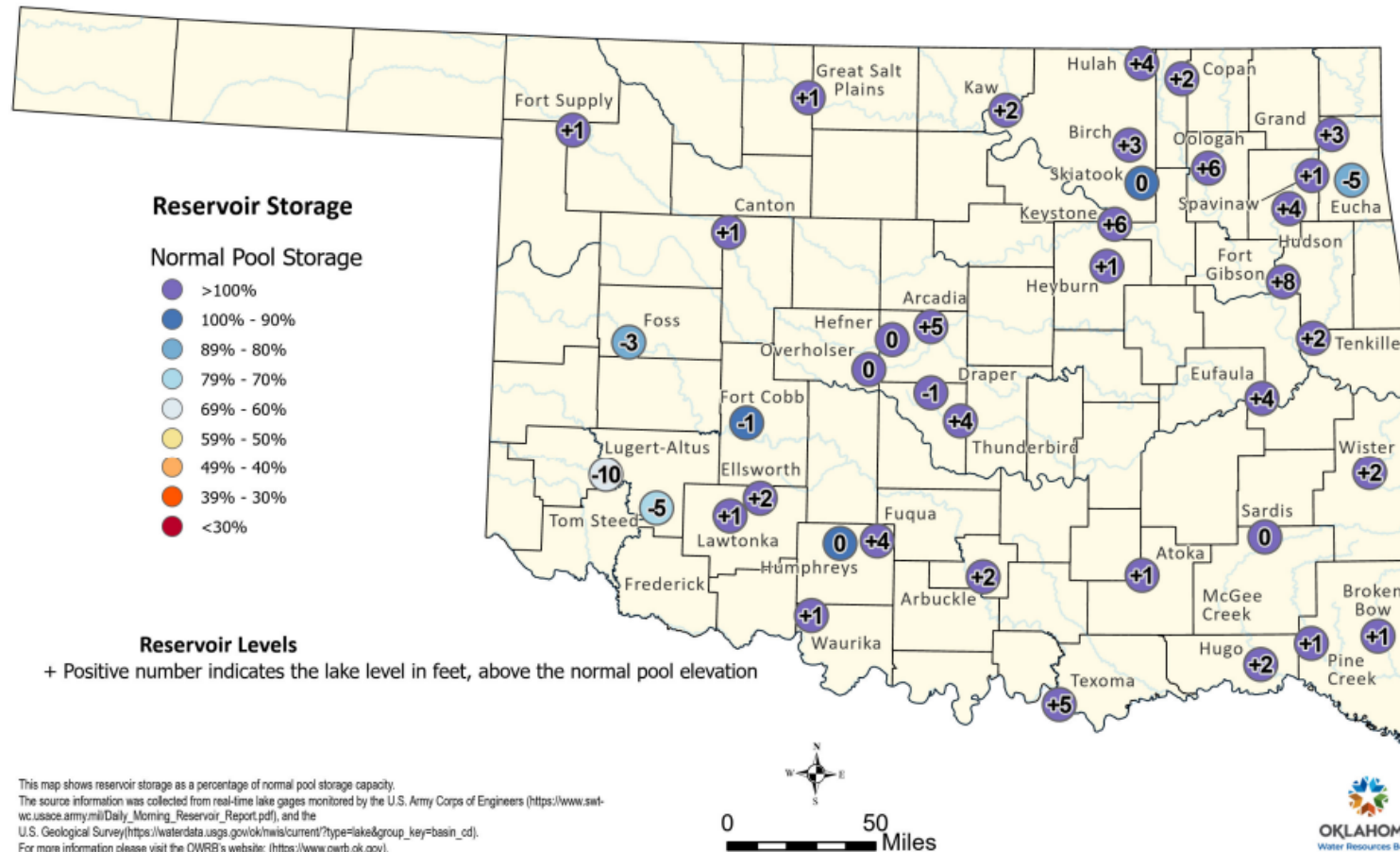
Created 8:15:02 AM May 1, 2025 CDT. © Copyright 2025

# PERCENTAGE OF SURFACE WATER CONSERVATION CAPACITY IN CENTRAL OK RESERVOIRS



Lake Hefner and Lake Overholser are terminal storage for Canton Lake. Lake Draper is terminal storage for McGee Creek and Atoka Lakes.

# OKLAHOMA RESERVOIR LEVELS AND STORAGE



## OKLAHOMA RESERVOIR LEVELS AND STORAGE AS OF 4/28/2024

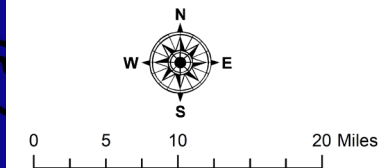
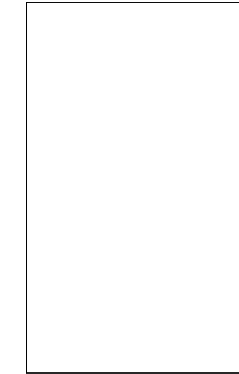
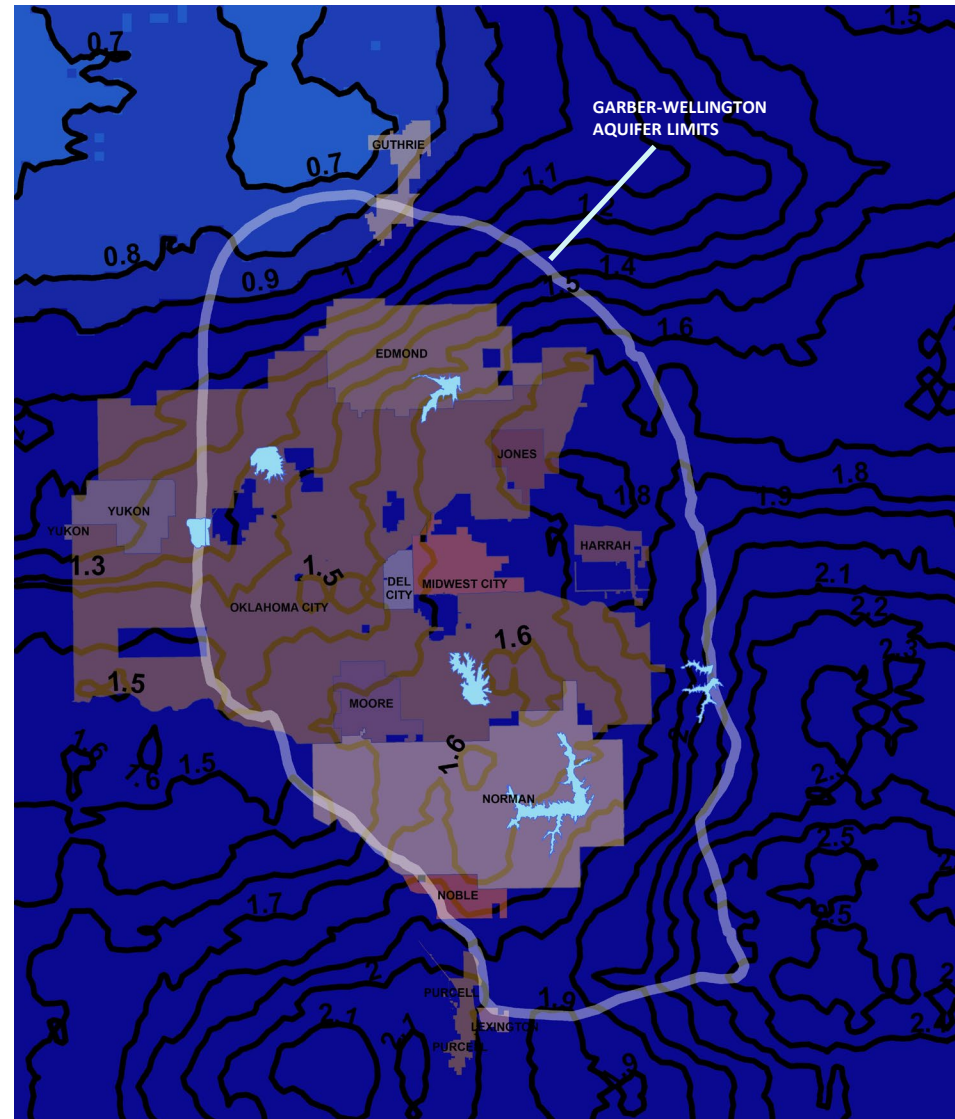
This map shows reservoir storage as a percentage of normal pool storage capacity. The source information was collected from real-time lake gages monitored by the U.S. Army Corps of Engineers ([https://www.swt-wc.usace.army.mil/Daily\\_Morning\\_Reservoir\\_Report.pdf](https://www.swt-wc.usace.army.mil/Daily_Morning_Reservoir_Report.pdf)), and the U.S. Geological Survey ([USGS Current Conditions for USGS 07333010 Atoka Reservoir near Stringtown, OK](https://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd)). For more information, please visit the OWRB's website: [Monthly Reservoir Storage.pdf](#)



# MONTHLY AQUIFER RECHARGE



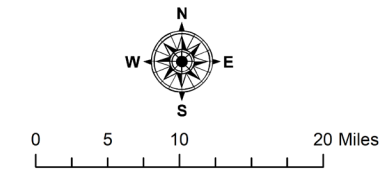
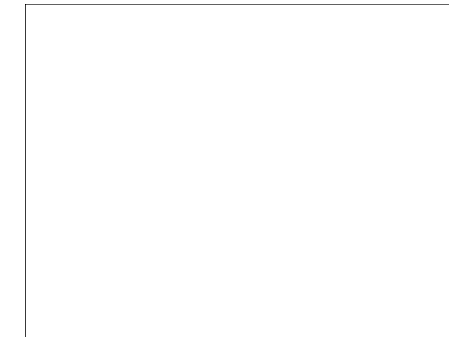
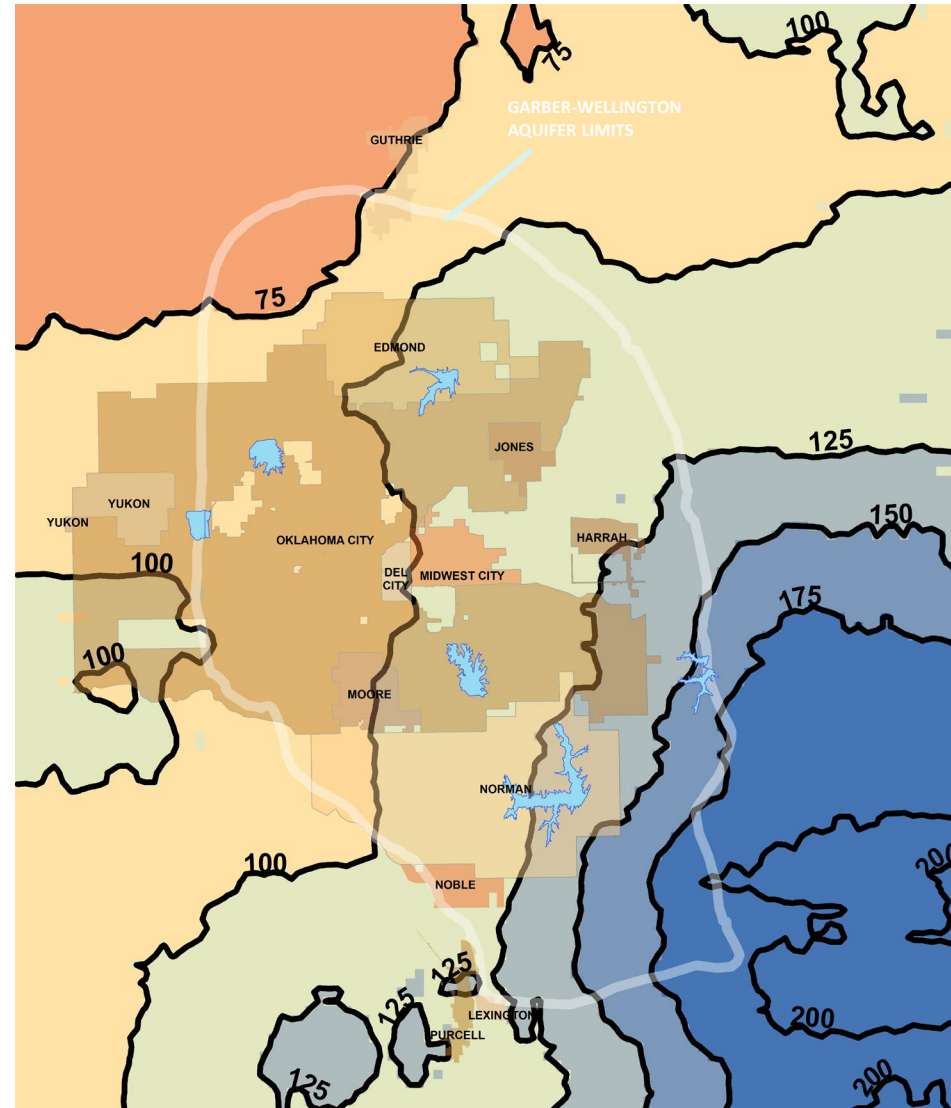
- Mean aquifer recharge in April 2025 was 1.57 inches.
- Normal mean recharge for April is 0.21 inches.
- We are 0.71 inches above normal for 2025.



# PERCENT TOTAL CUMULATIVE AQUIFER RECHARGE – Last 12 Months



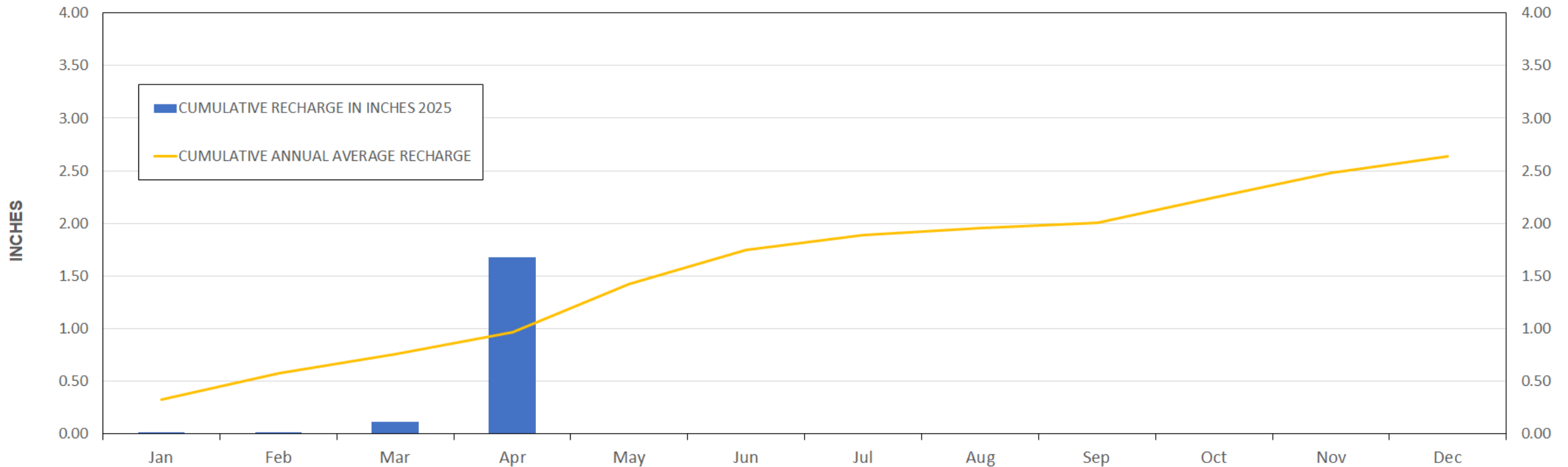
- Most of the recharge in the past 12 months was south and east of the metropolitan area.
- April 2025 had 1.57 inches of recharge. Normal mean recharge for April is 0.21 inches.
- Over the past 12 months the metropolitan area has received about 100% of annual recharge.



# RECHARGE CHARTS CENTRAL OKLAHOMA AQUIFER SYSTEM



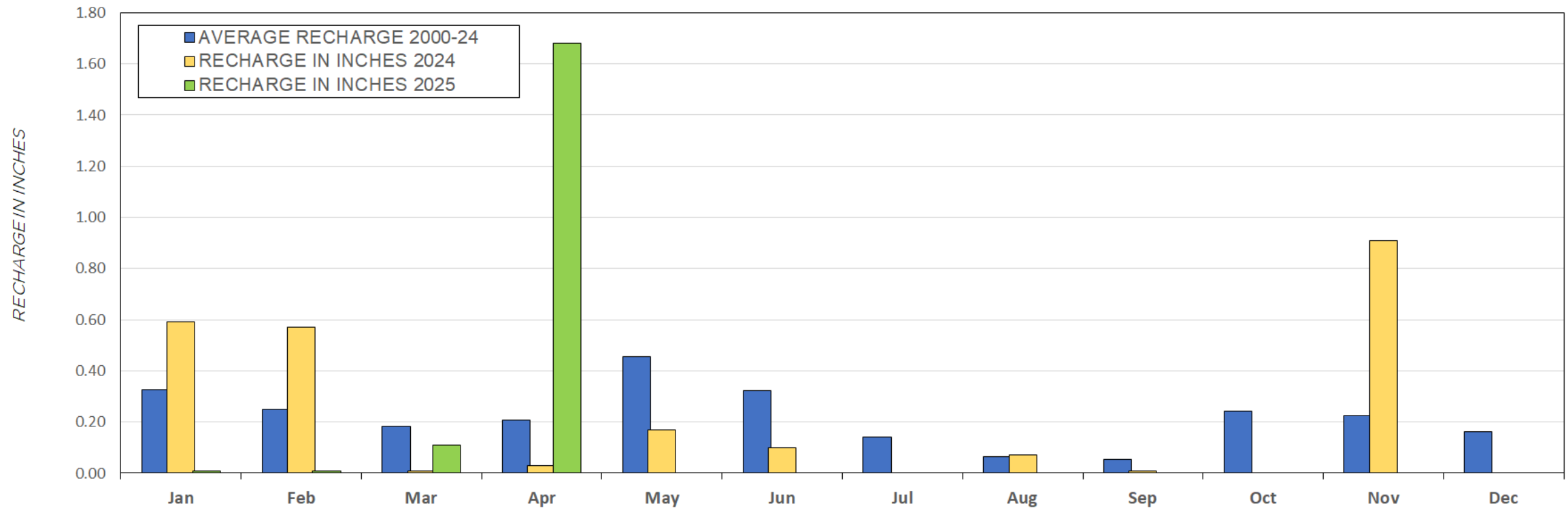
## ACCUMULATED CENTRAL OKLAHOMA AQUIFER SYSTEM RECHARGE 2025



# RECHARGE CHARTS CENTRAL OKLAHOMA AQUIFER SYSTEM CONTINUED

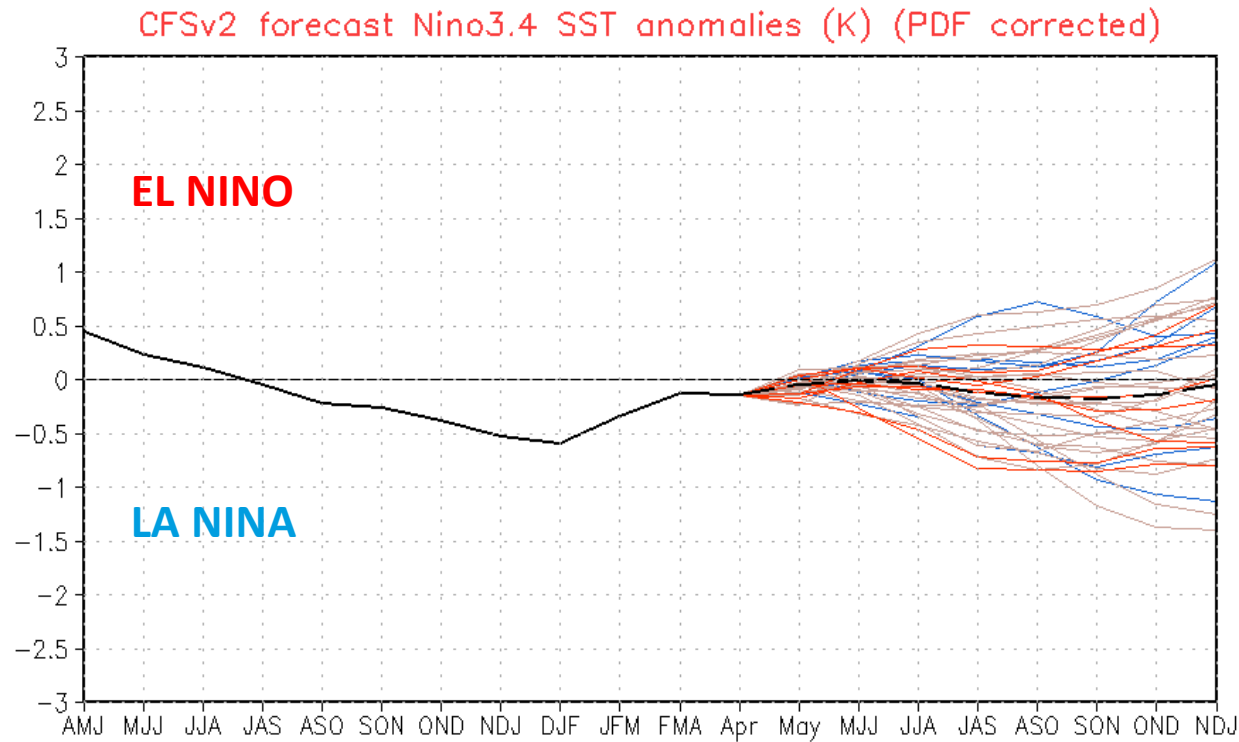


## MONTHLY AQUIFER RECHARGE 2025





# ENSO CYCLE - RECENT EVOLUTION, CURRENT STATUS AND PREDICTIONS

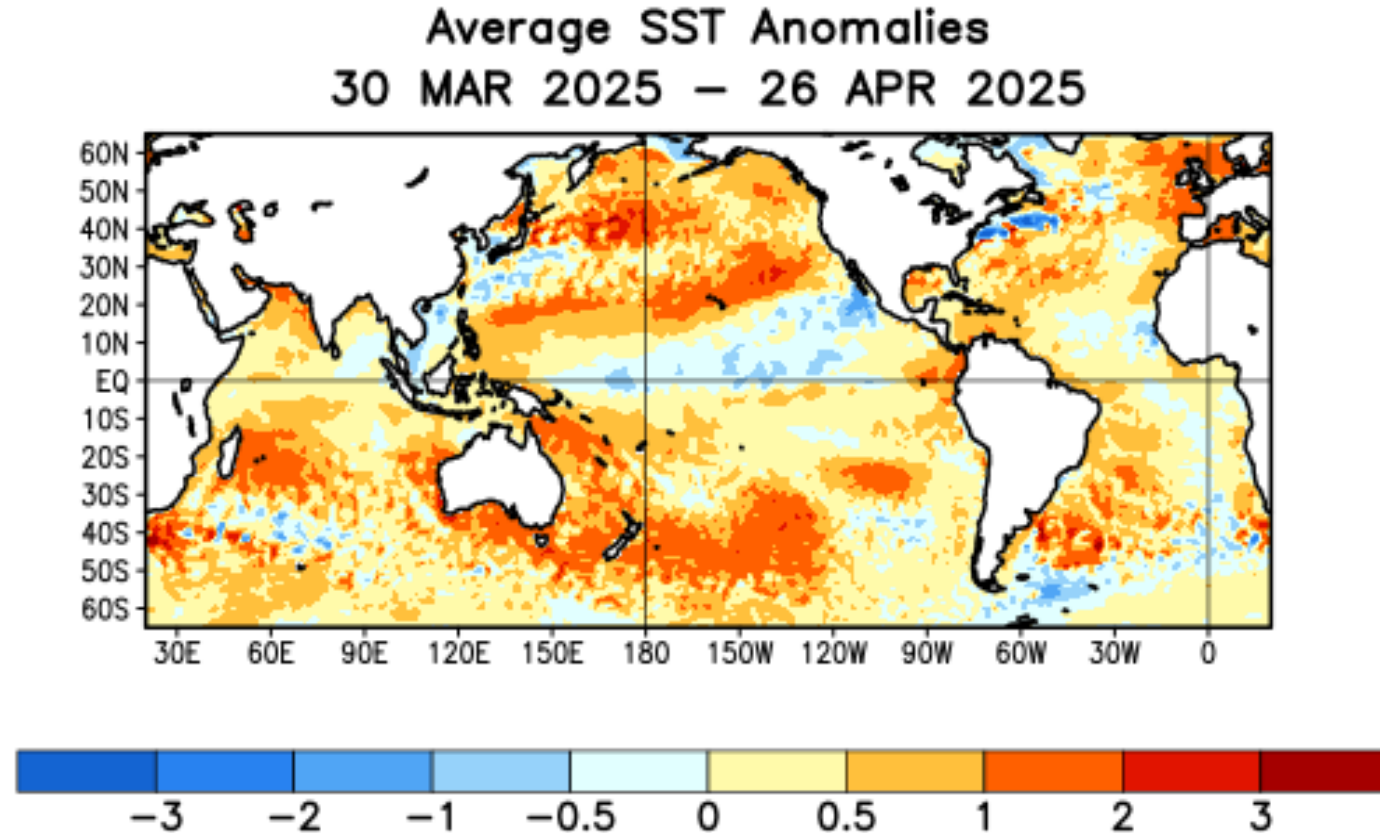


— Latest 8 forecast members  
— Earliest 8 forecast members  
— Other forecast members  
(Climatology base period: 1991–2020)

— Forecast ensemble mean  
— NCEI Olv2.1 daily analysis



# ENSO CYCLE - RECENT EVOLUTION, CURRENT STATUS AND PREDICTIONS





## ENSO Alert System Status: La Niña Advisory

- ENSO-neutral conditions are present.
- Equatorial sea surface temperatures (SSTs) are near-average across most of the Pacific Ocean.
- ENSO-neutral is favored during the Northern Hemisphere summer, with a greater than 50% chance through August-October 2025.





# QUESTIONS?

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ASSOCIATION OF  
CENTRAL OKLAHOMA  
GOVERNMENTS