



DROUGHT CONDITIONS

IN CENTRAL OKLAHOMA

John Harrington

Water Resources Director

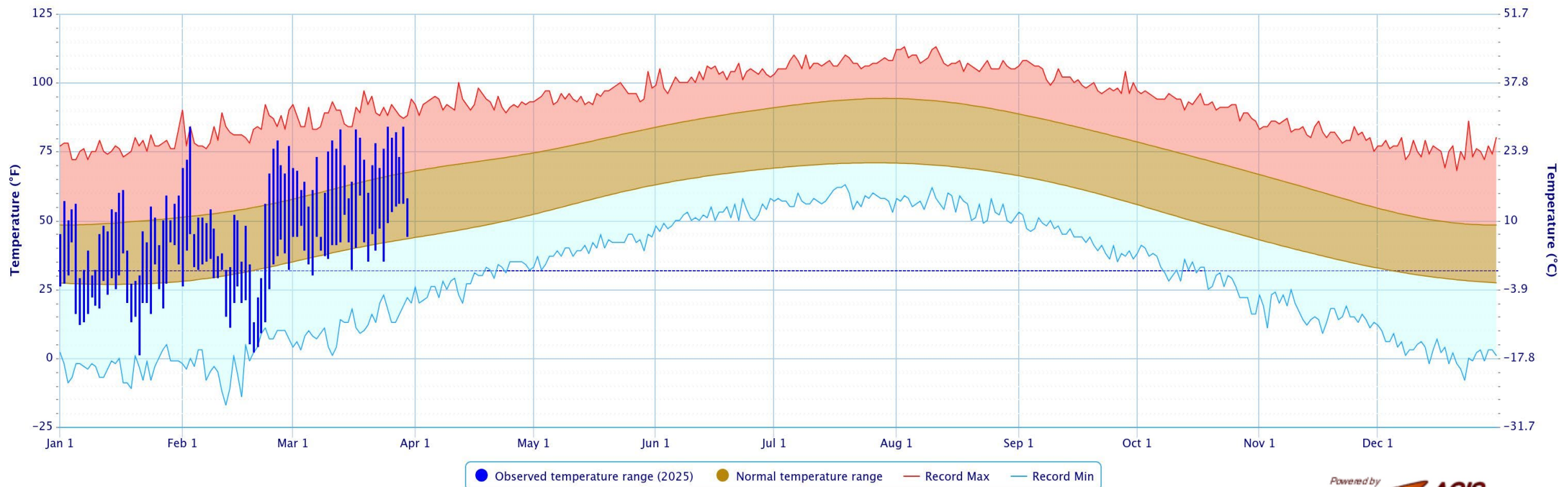
O: 405.234.2264

jharrington@acogok.org

April 2025

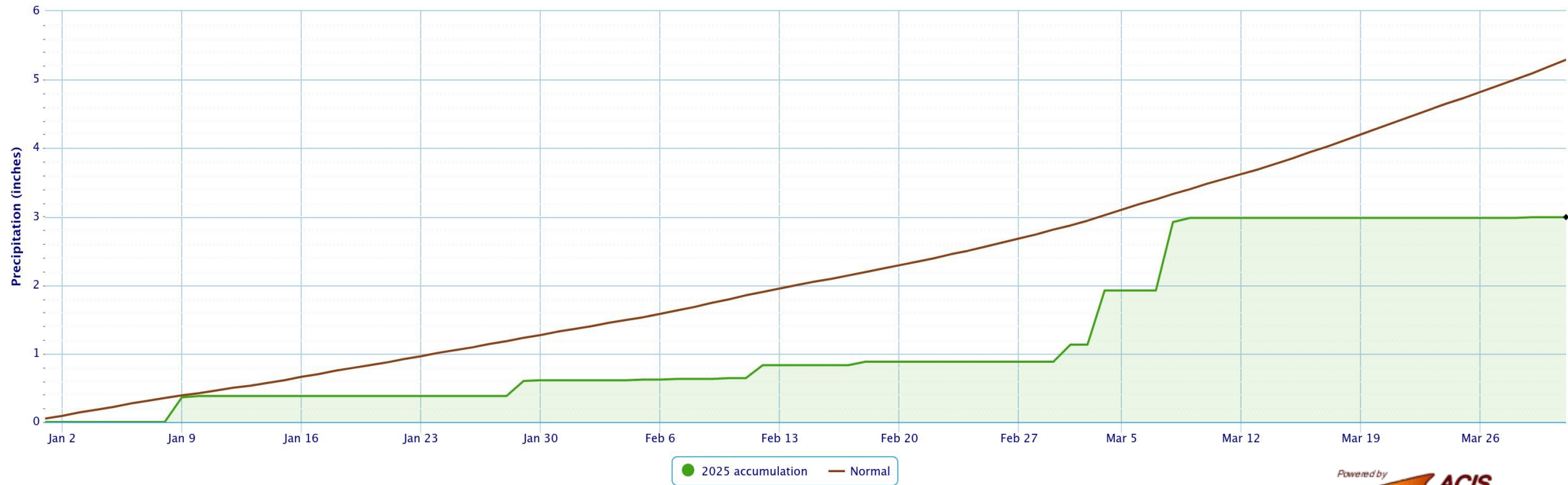


TEMPERATURE PLOT FOR OKLAHOMA CITY, OKLAHOMA FOR 2025



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NOAA Regional Climate Centers powered by ACIS

PRECIPITATION PLOT FOR OKLAHOMA CITY, OKLAHOMA FOR 2025



RAINFALL SUMMARIES BY OKLAHOMA CLIMATE DIVISION



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

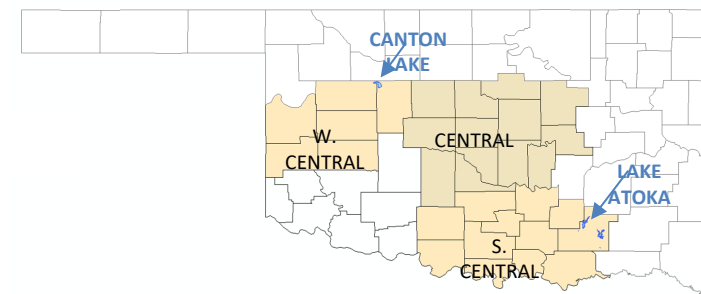
Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	2.01"	-2.27"	47%	23rd driest	0.40"	8.99"
Central	3.04"	-3.23"	48%	18th driest	0.93"	13.97"
S. Central	5.65"	-2.01"	74%	32nd driest	1.68"	16.50"
Statewide	3.87"	-2.44"	61%	21st driest	1.36"	12.61"

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

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	10.50"	+0.68"	107%	32nd wettest	2.25"	18.54"
Central	13.62"	-0.76"	95%	33rd wettest	4.42"	28.04"
S. Central	16.16"	-1.19"	93%	40th wettest	5.19"	28.92"
Statewide	14.08"	-0.31"	98%	35th wettest	4.77"	23.73"

Spring March 01 through 30-Mar-2025

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	1.47"	-0.74"	67%	52nd driest	0.00"	6.28"
Central	1.95"	-1.09"	64%	45th driest	0.10"	7.76"
S. Central	3.37"	+0.05"	102%	34th wettest	0.22"	8.10"
Statewide	2.00"	-0.92"	69%	39th driest	0.40"	6.85"



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.

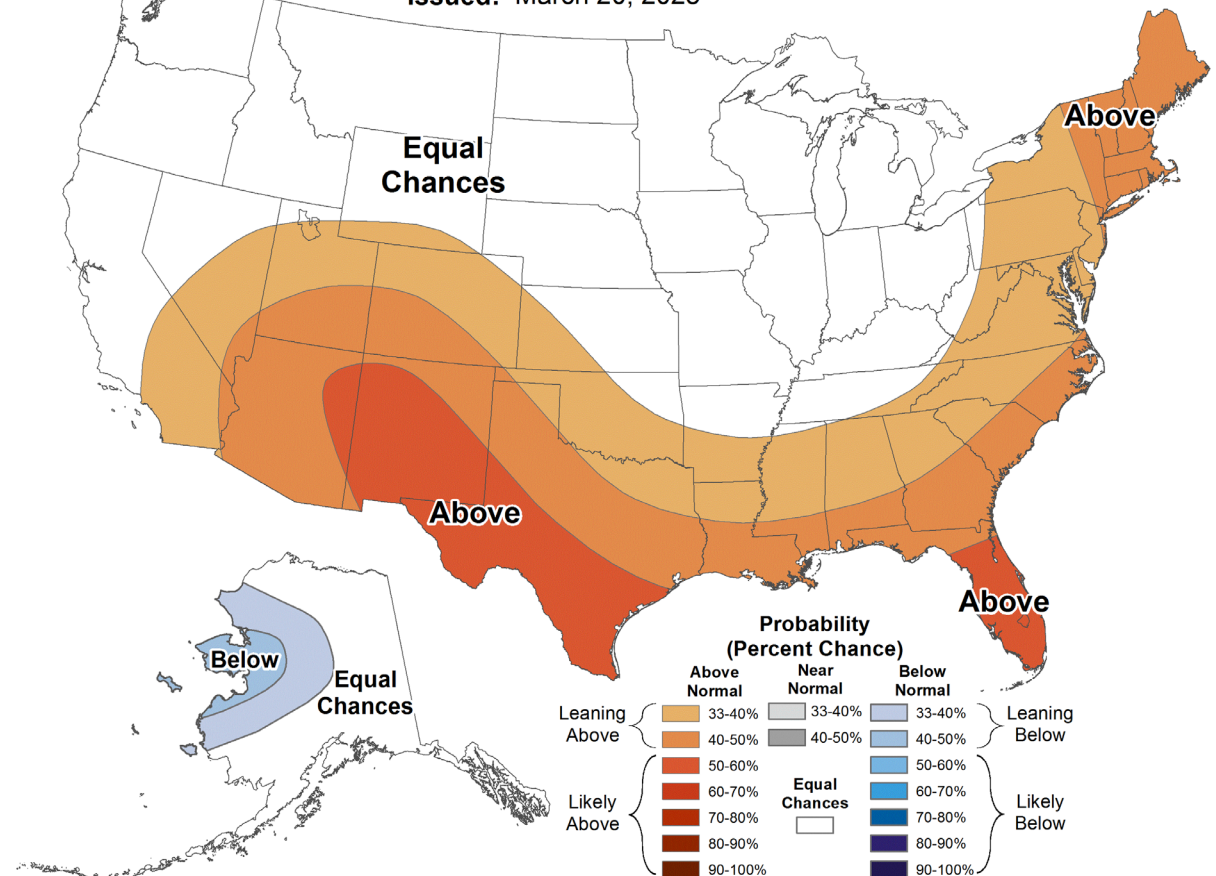
[Climate Prediction Center - Updated OFFICIAL 30-Day Forecasts \(noaa.gov\)/](https://www.noaa.gov/climate-prediction-center)



Monthly Temperature Outlook



Valid: April 2025
Issued: March 20, 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.

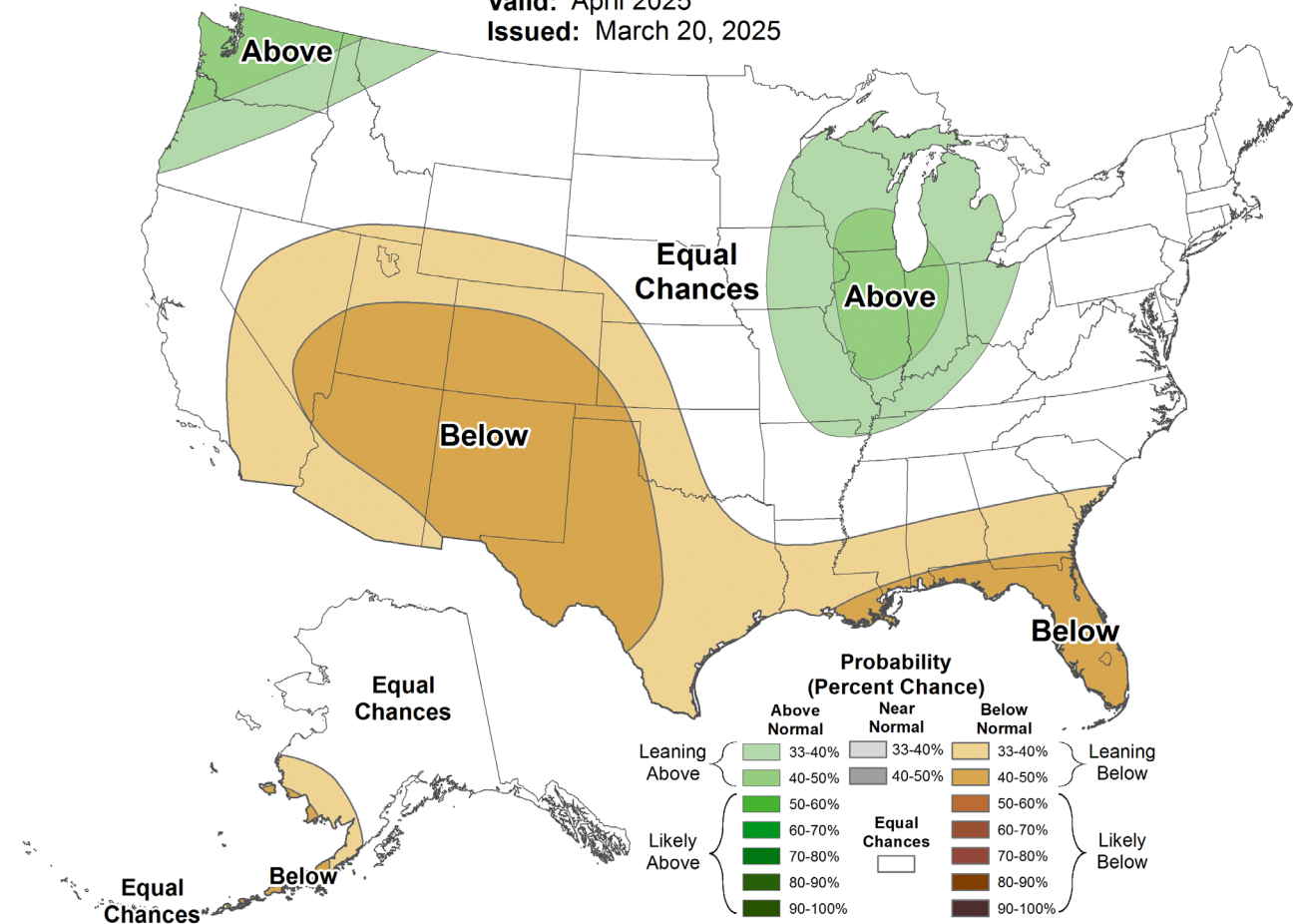
[Climate Prediction Center - Updated OFFICIAL 30-Day Forecasts \(noaa.gov\)/](https://www.noaa.gov/climate-prediction-center)



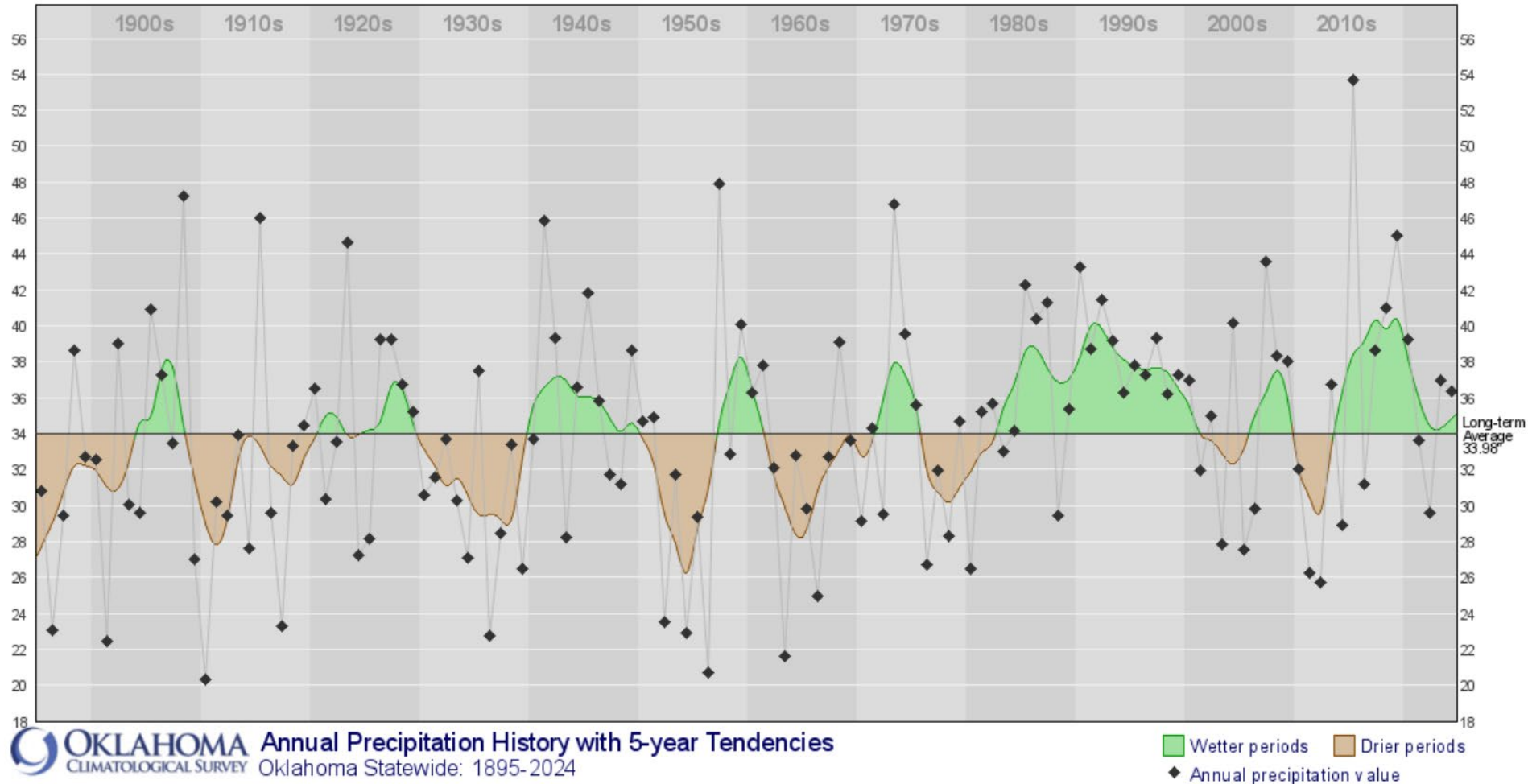
Monthly Precipitation Outlook



Valid: April 2025
Issued: March 20, 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.

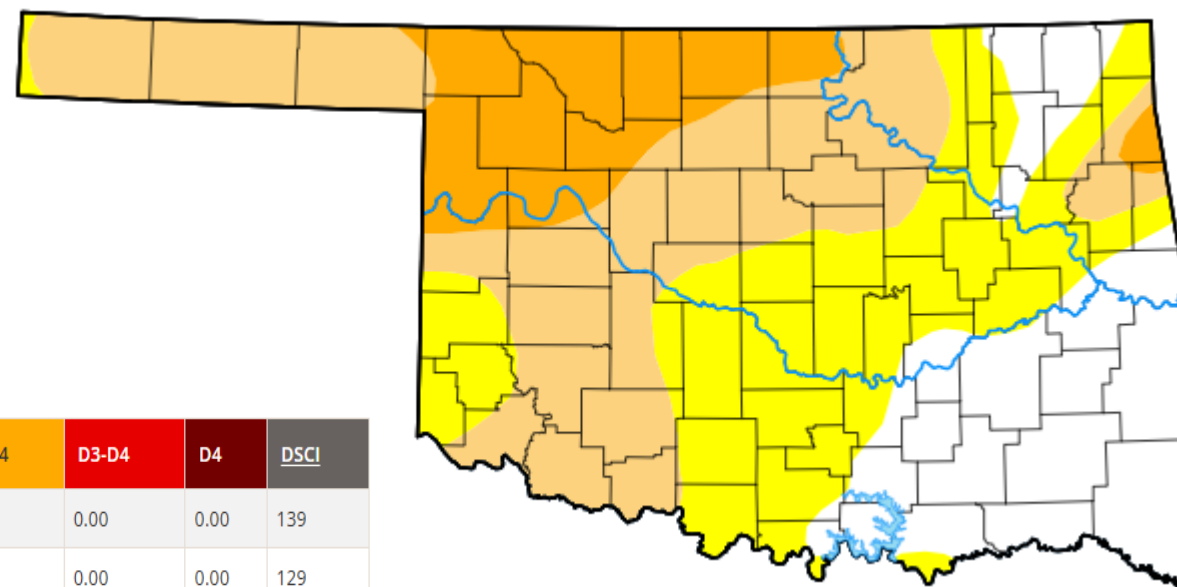
U.S. DROUGHT MONITOR - OKLAHOMA



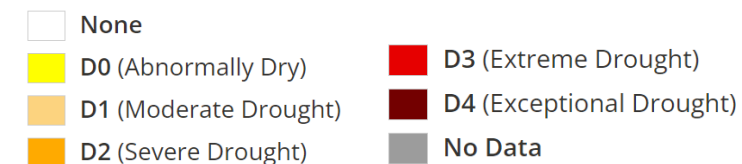
March 27, 2025

Abnormal dryness or drought is currently affecting approximately 816,468 people in Oklahoma.

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2025-03-25	23.05	76.95	47.52	14.10	0.00	0.00	139
Last Week to Current	2025-03-18	26.78	73.22	42.48	13.60	0.00	0.00	129
3 Months Ago to Current	2024-12-24	56.78	43.22	11.54	0.59	0.00	0.00	55
Start of Calendar Year to Current	2024-12-31	70.28	29.72	5.52	0.33	0.00	0.00	36
Start of Water Year to Current	2024-10-01	22.82	77.18	61.31	37.39	11.50	0.00	187
One Year Ago to Current	2024-03-26	66.24	33.76	8.83	0.19	0.00	0.00	43



Intensity



U.S. DROUGHT MONITOR NATIONWIDE MAP



Map released: March 27, 2025

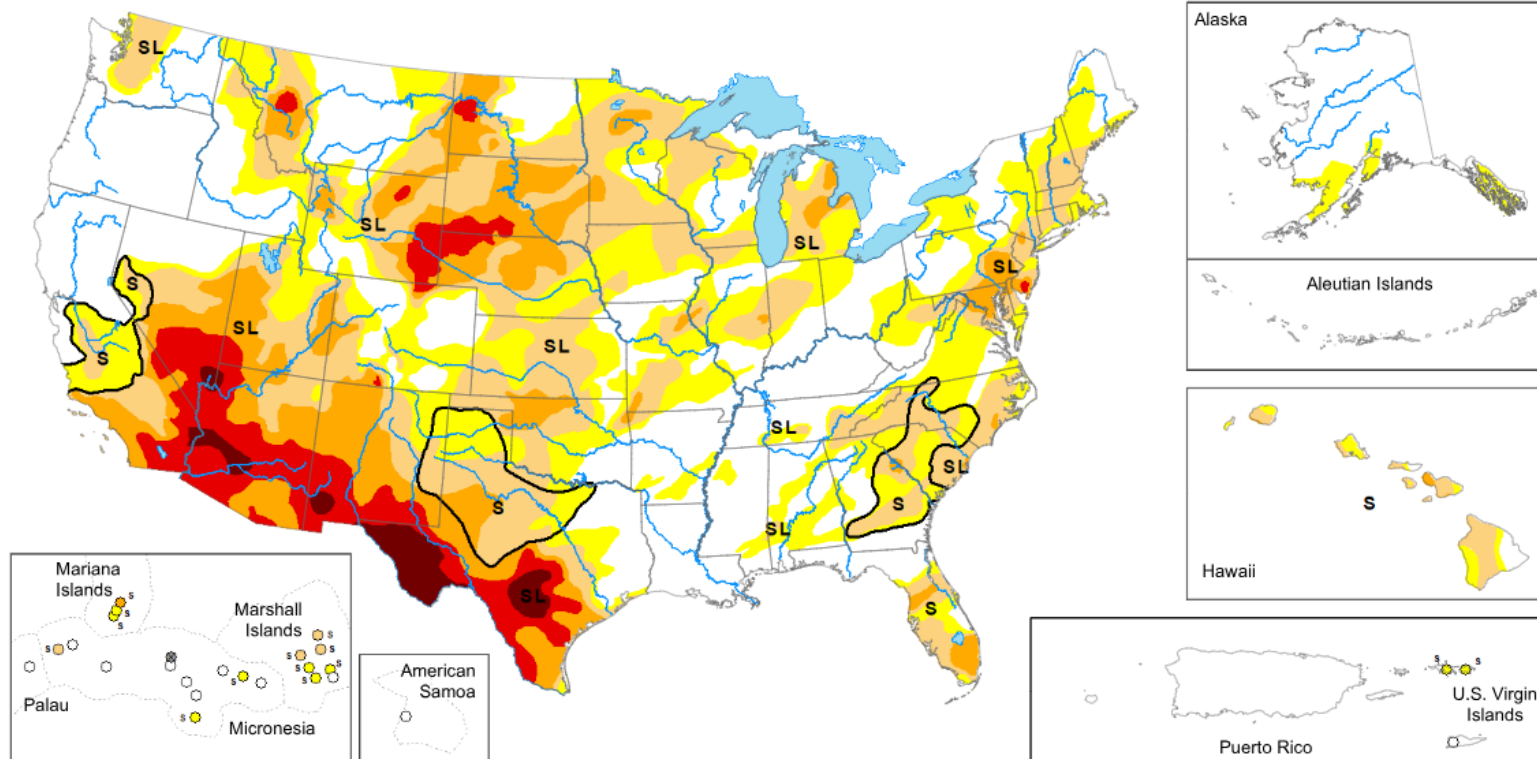
Data valid: March 25, 2025

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



United States and Puerto Rico Author(s):
Brad Rippey, U.S. Department of Agriculture

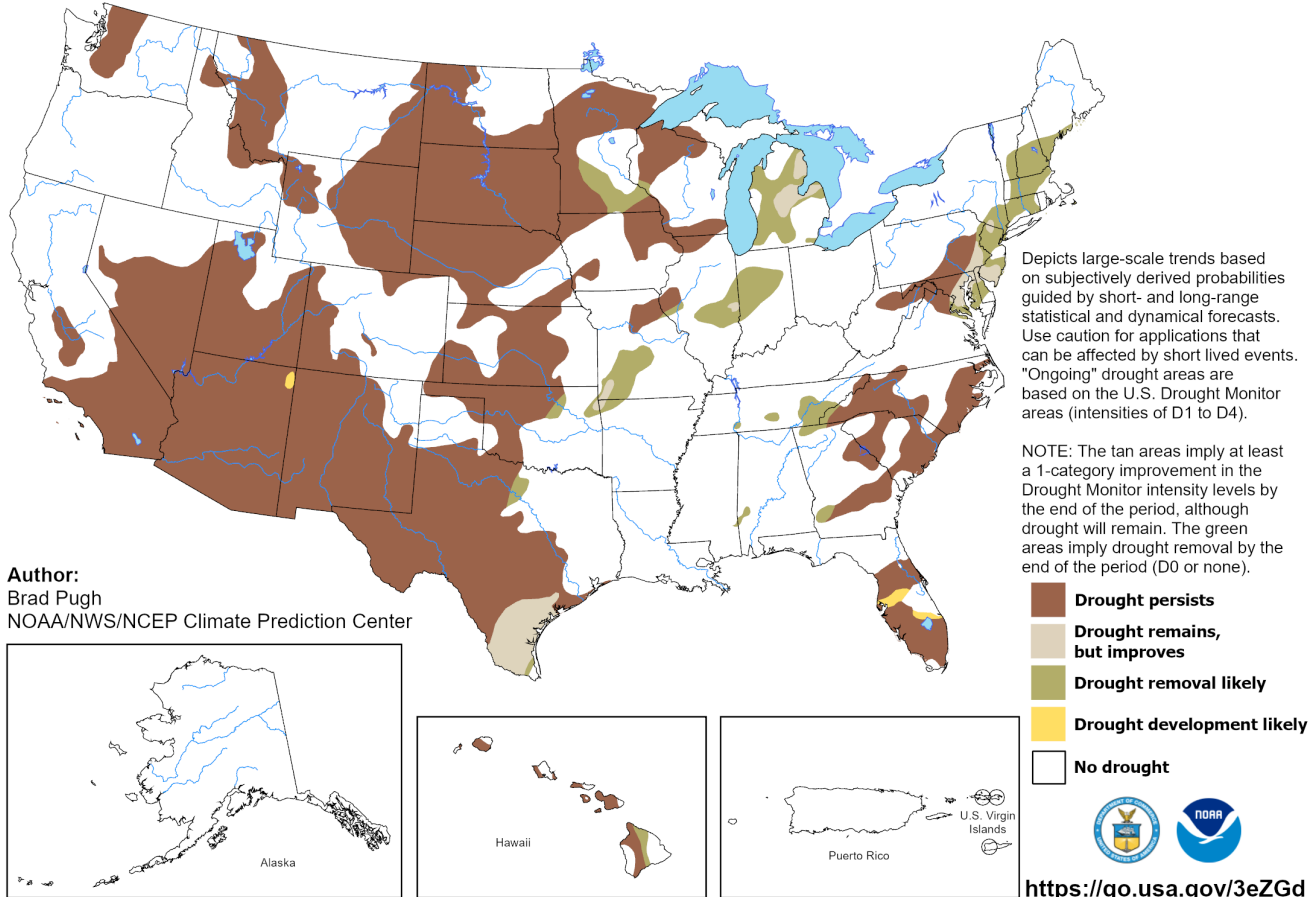
Pacific Islands and Virgin Islands Author(s):
Denise Gutzmer, National Drought Mitigation
NIDIS Drought.gov
NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM U.S. Drought Portal

U.S. DROUGHT MONITOR MONTHLY DROUGHT OUTLOOK MAP



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

Valid for April 2025
Released March 31, 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).

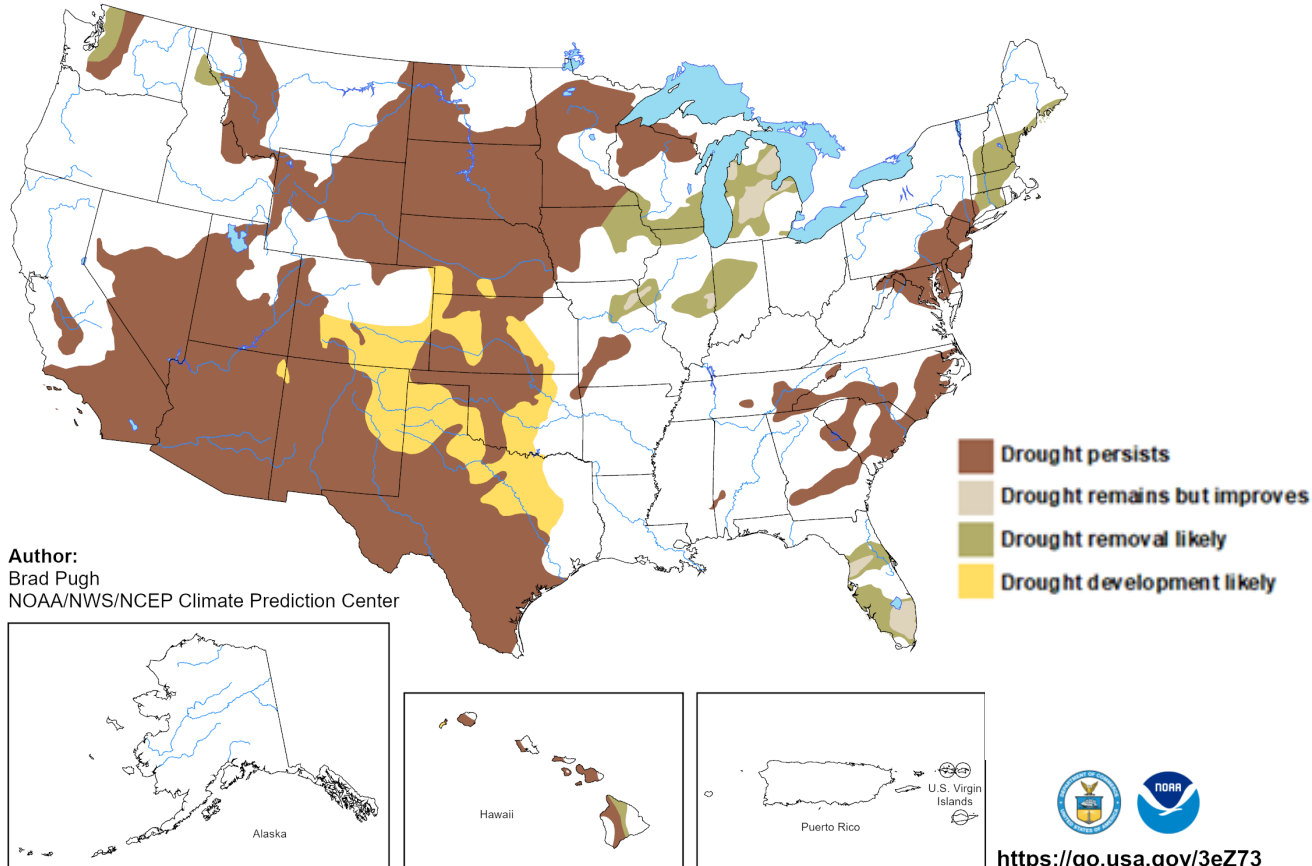
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

U.S. DROUGHT MONITOR SEASONAL DROUGHT OUTLOOK MAP



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

Valid for March 20 - June 30, 2025
Released March 20, 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).

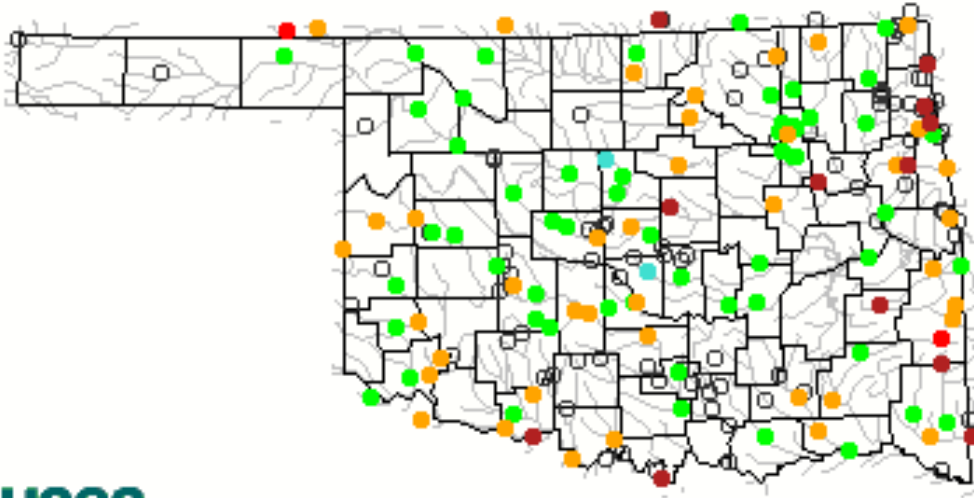


<https://go.usa.gov/3eZ73>

USGS STREAMFLOW DATA



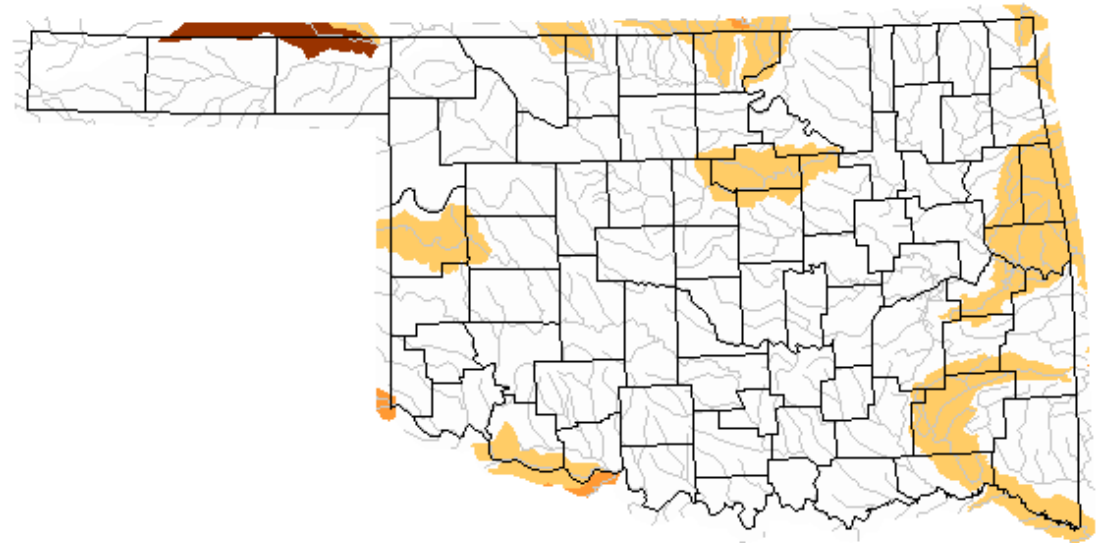
Monday, March 31, 2025 14:30ET



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		

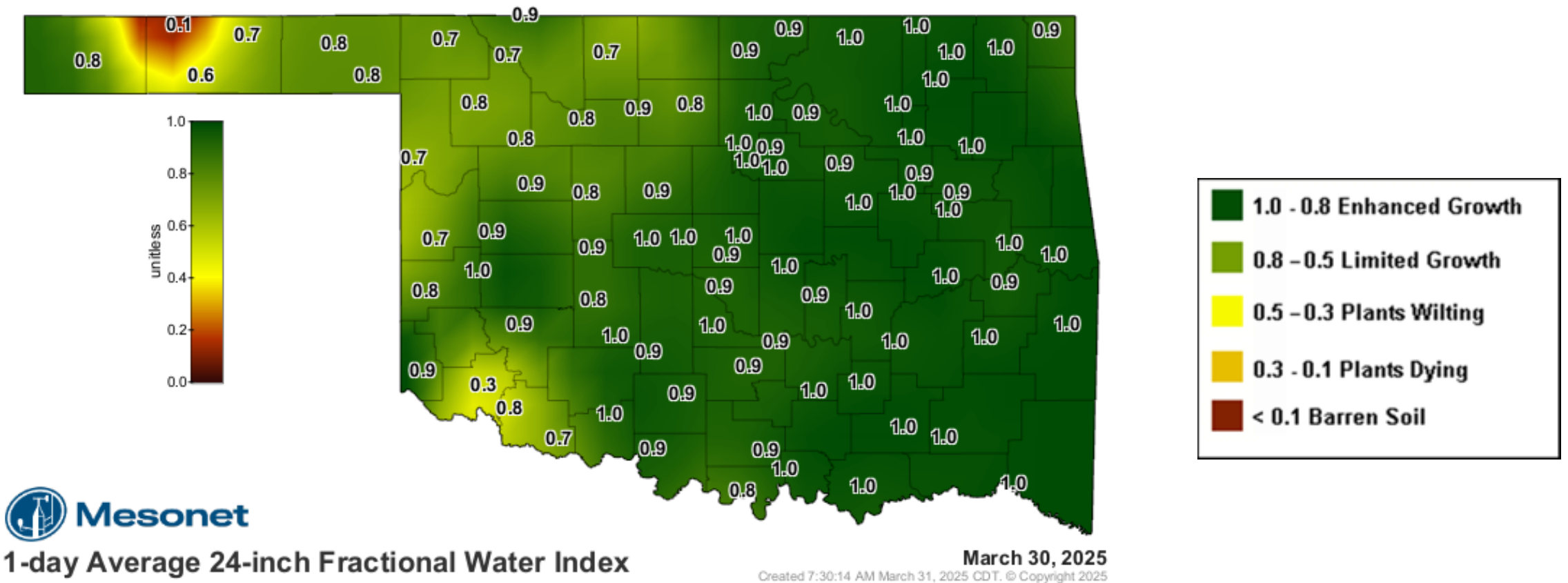
Below normal 28-day average streamflow

Sunday, March 30, 2025

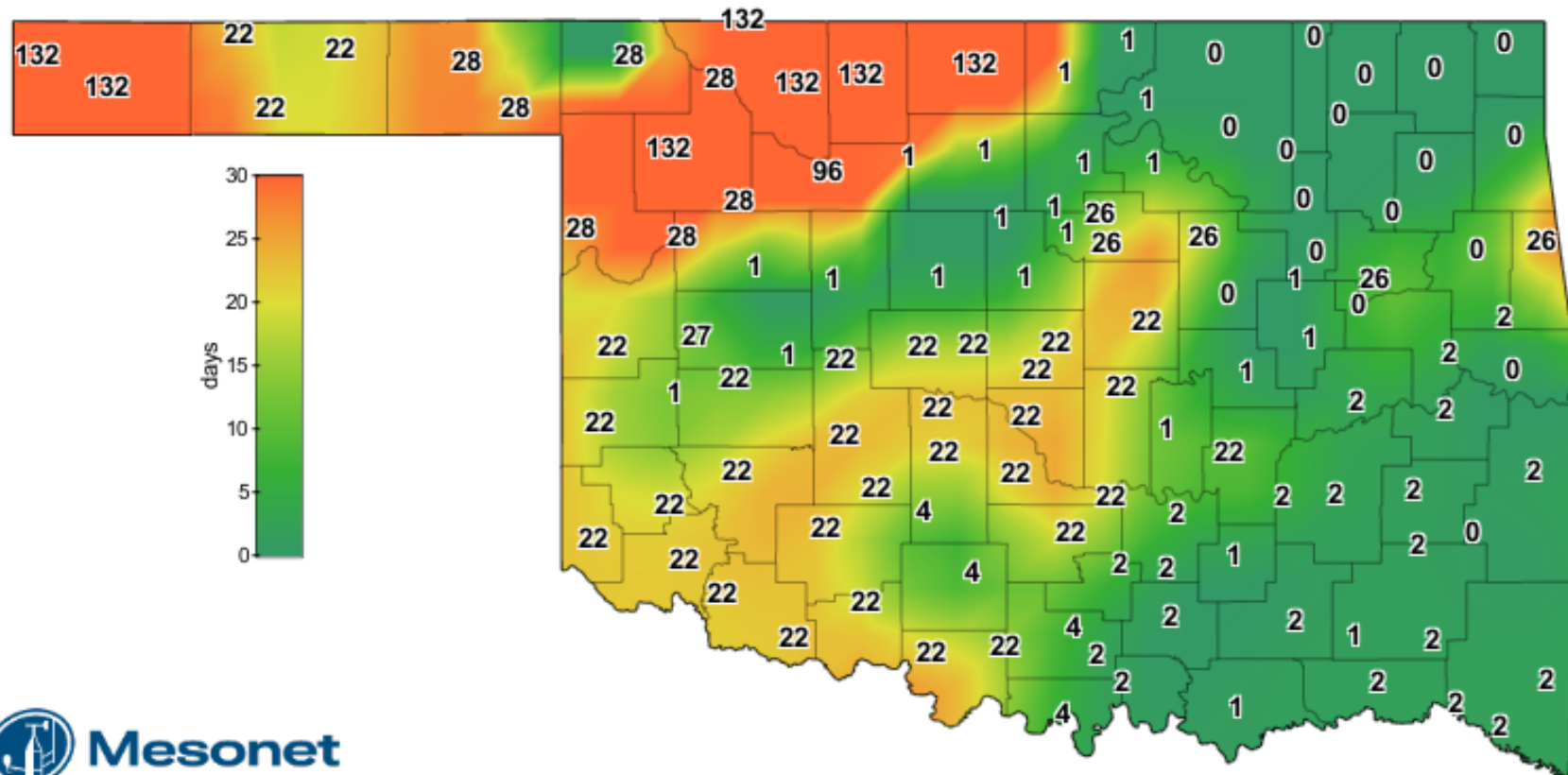


Explanation - Percentile classes				
 	 	 	 	
Low	<=5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

SOIL MOISTURE MAP



CONSECUTIVE DAYS WITHOUT RAINFALL MAP

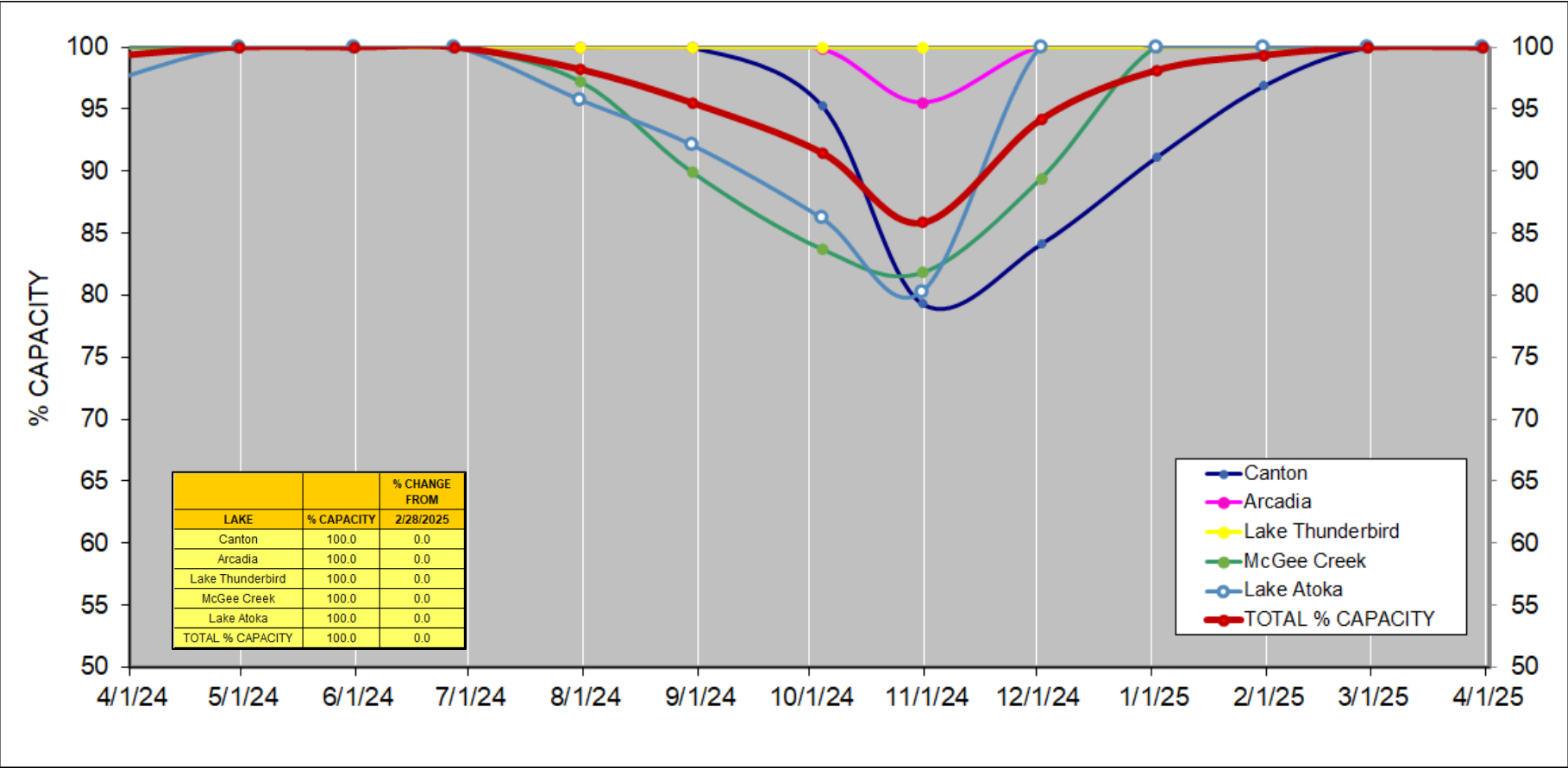


Consecutive Days With Less Than 0.25" Rainfall

March 30, 2025

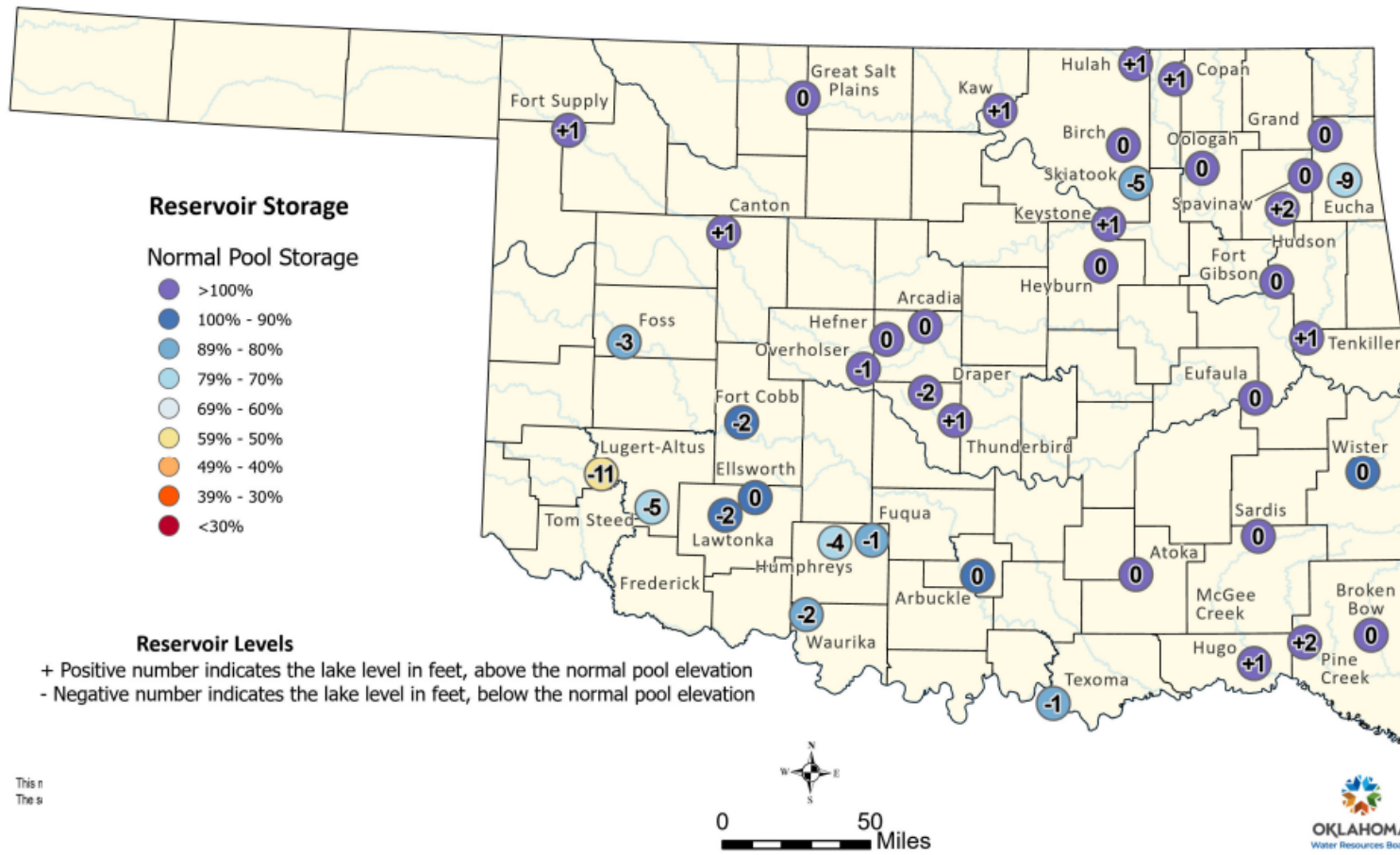
Created 8:15:02 AM March 31, 2025 CDT. © Copyright 2025

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



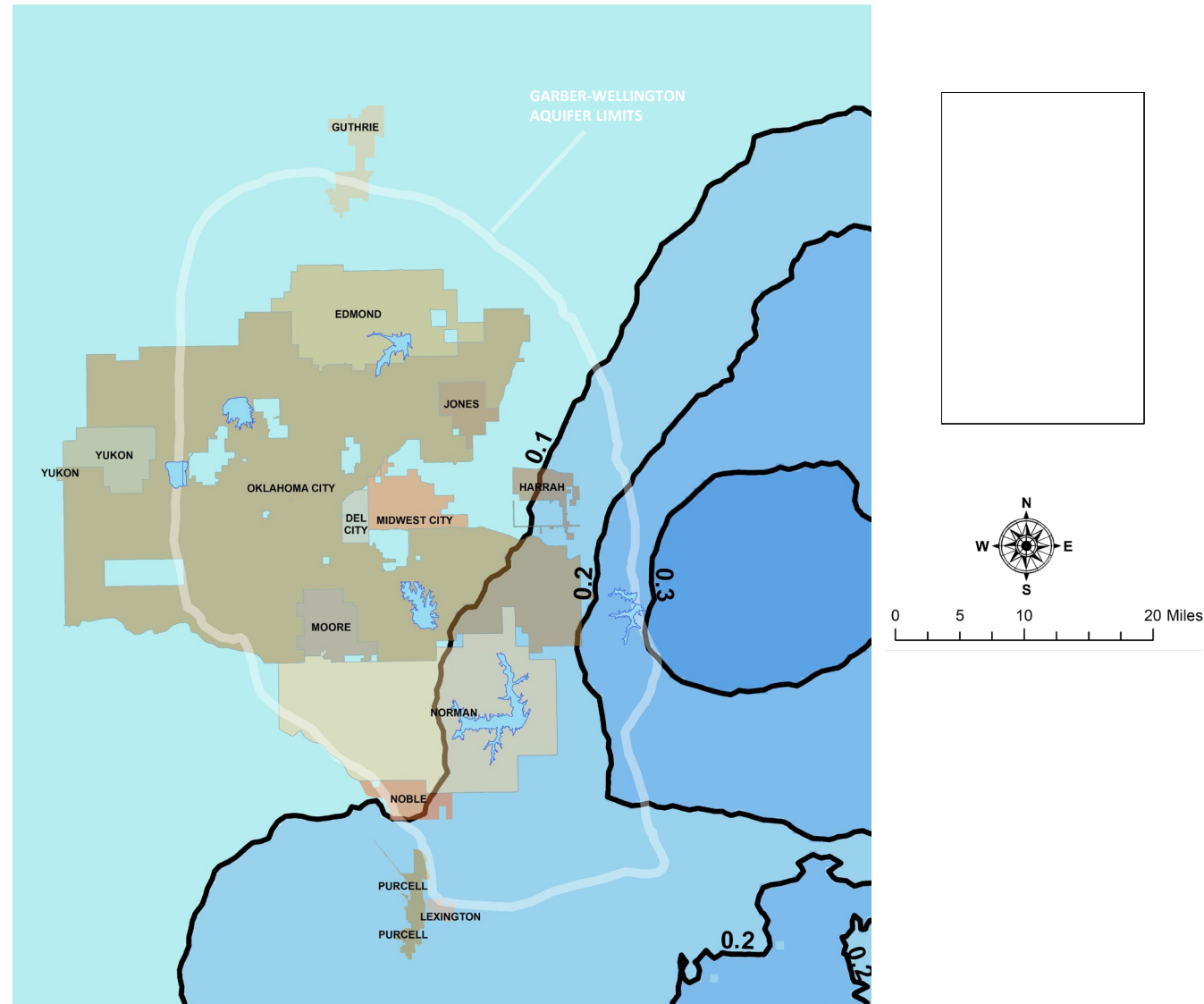
OKLAHOMA RESERVOIR LEVELS AND STORAGE AS OF 3/31/2024

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), and the U.S. Geological Survey ([USGS Current Conditions for USGS 07333010 Atoka Reservoir near Stringtown, OK](https://www.usgs.gov/monitoring/products-reports/real-time/USGS-07333010-Atoka-Reservoir-near-Stringtown-OK)). For more information, please visit the OWRB's website: [Monthly Reservoir Storage.pdf](#)

MONTHLY AQUIFER RECHARGE



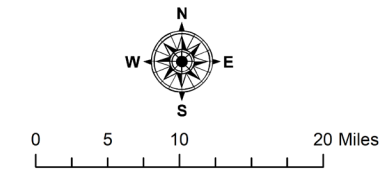
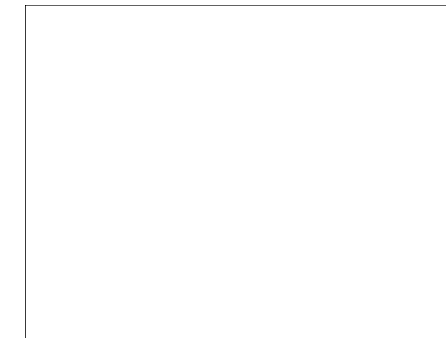
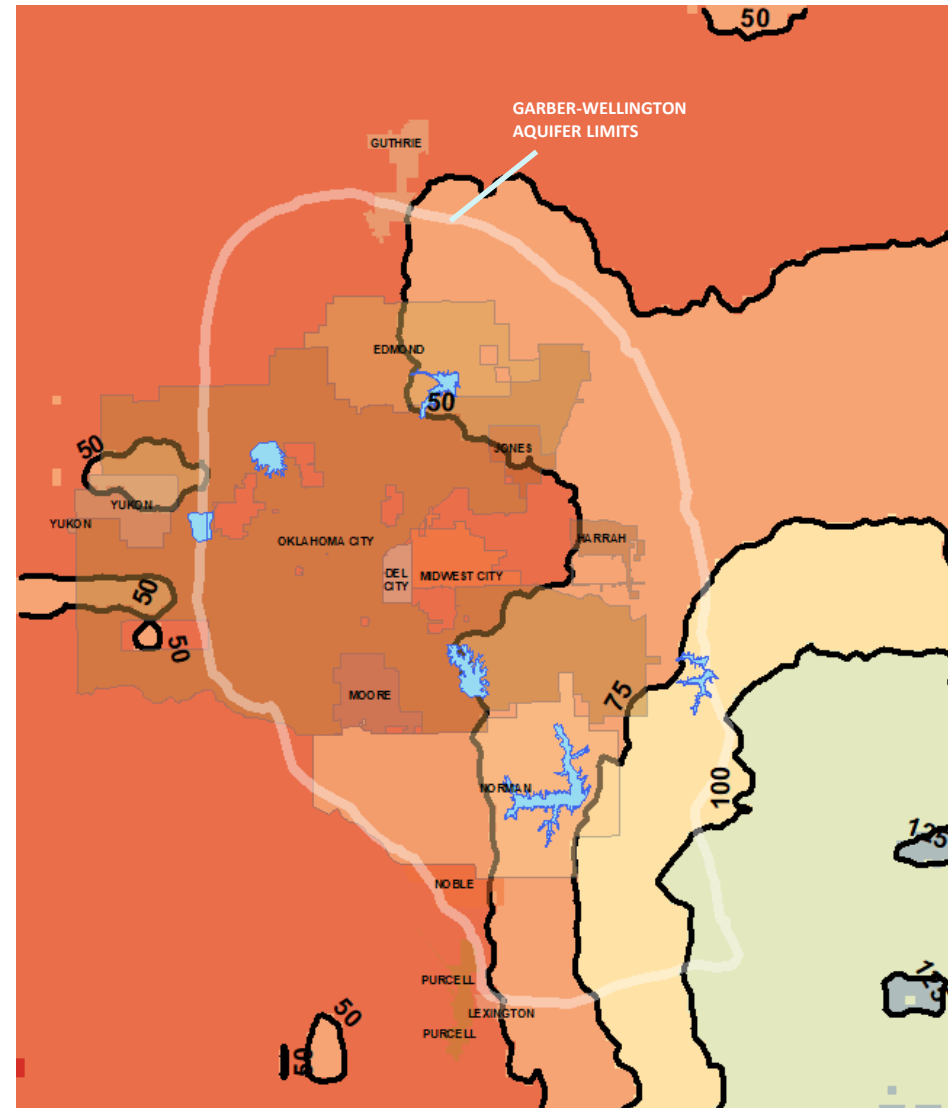
- Mean aquifer recharge in March 2025 was 0.10 inches.
- Normal mean recharge for March is 0.18 inches.
- We are -0.65 inches below normal for 2025.



PERCENT TOTAL CUMULATIVE AQUIFER RECHARGE – Last 12 Months



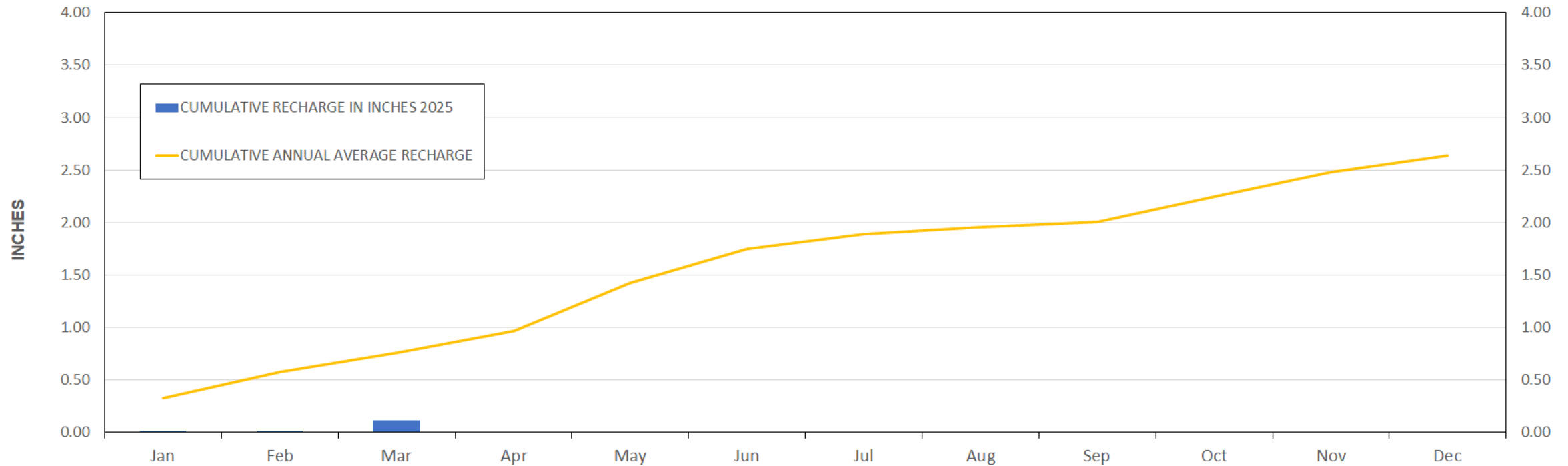
- Most of the recharge in the past 12 months was south and east of the metropolitan area.
- March 2025 had 0.10 inches of recharge. Normal mean recharge for March is 0.18 inches.
- Over the past 12 months the metropolitan area has received about 72% of annual recharge.



RECHARGE CHARTS CENTRAL OKLAHOMA AQUIFER SYSTEM



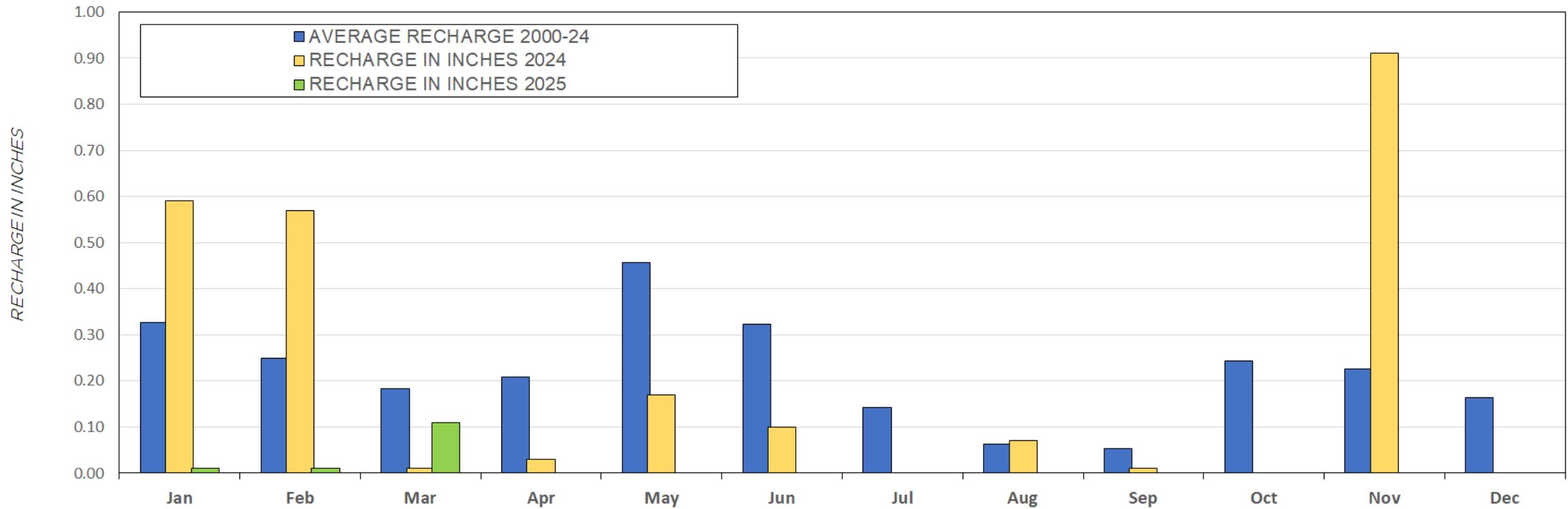
ACCUMULATED CENTRAL OKLAHOMA AQUIFER SYSTEM RECHARGE 2025



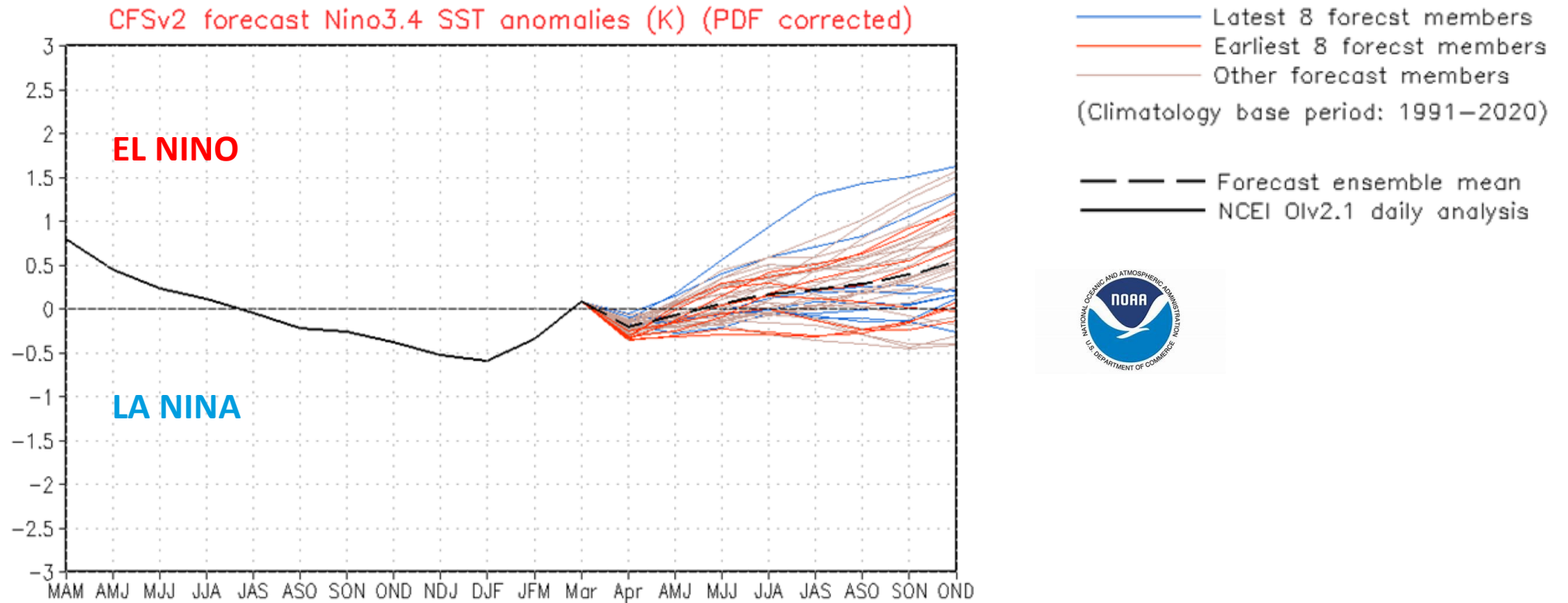
RECHARGE CHARTS CENTRAL OKLAHOMA AQUIFER SYSTEM CONTINUED



MONTHLY AQUIFER RECHARGE 2025



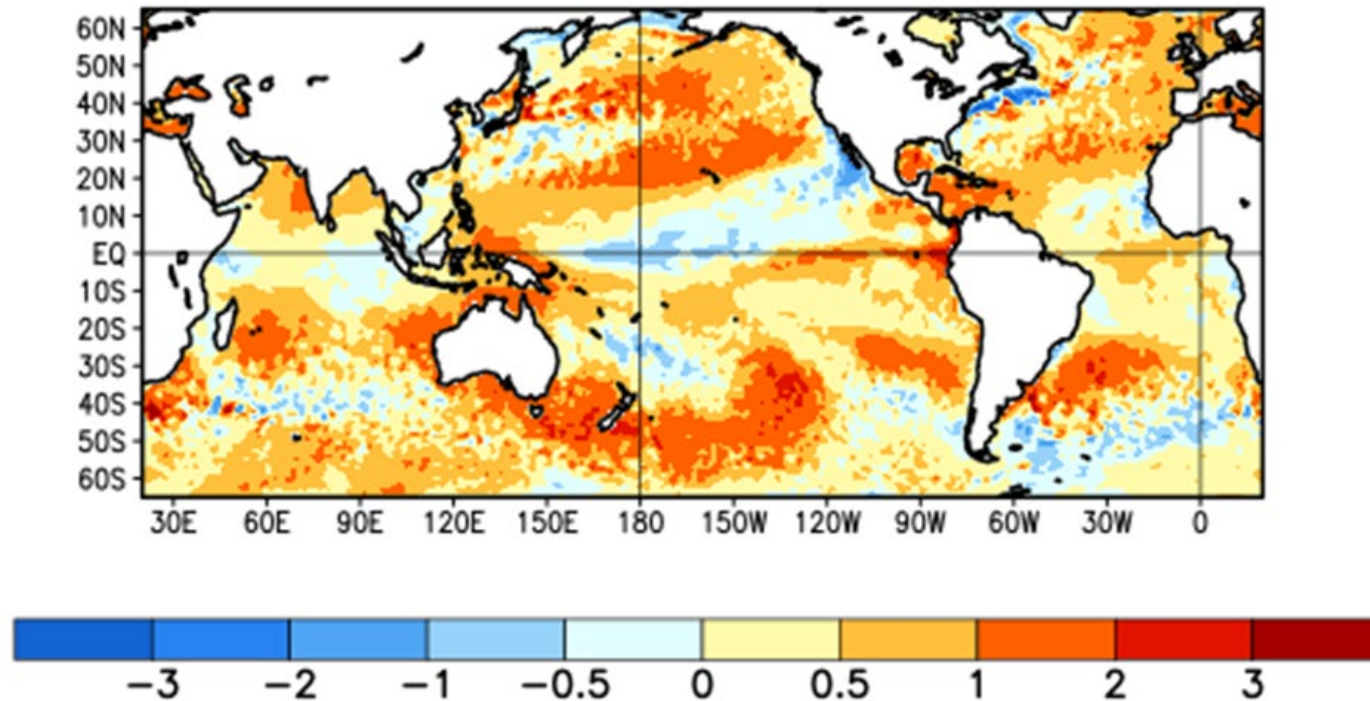
ENSO CYCLE - RECENT EVOLUTION, CURRENT STATUS AND PREDICTIONS



ENSO CYCLE - RECENT EVOLUTION, CURRENT STATUS AND PREDICTIONS



Average SST Anomalies
2 MAR 2025 – 29 MAR 2025





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.
- Tropical Pacific atmospheric anomalies are consistent with La Niña.
- ENSO-neutral is favored to develop in the next month and persist through Northern Hemisphere summer (62% chance in June-August 2025).



QUESTIONS?

John Harrington

Water Resources Director

O: 405.234.2264

jharrington@acogok.org

acogok.org



ASSOCIATION OF
CENTRAL OKLAHOMA
GOVERNMENTS