DROUGHT CONDITIONS
IN CENTRAL OKLAHOMA

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June 1, 2023
Precipitation Plot for Oklahoma City, Oklahoma for 2023

Accumulated Precipitation – Oklahoma City Area, OK (ThreadEx)

http://xmacis.rcc-acis.org/
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.
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)
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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.
The Palmer Drought Index (PDI) maps show long-term (cumulative) meteorological drought and wet conditions.

The maps show how the geographical pattern of the long-term moisture conditions has changed over the last 12 months.

On these maps, the red shading denotes drought conditions while the green shading indicates wet conditions.

PALMER VALUE
27 MAY 2023

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ckds/palmer_drought/wpsouth.txt
June 4, 2023

Abnormal dryness or drought are currently affecting approximately 929,509 people in Oklahoma.
Map released: May 25, 2023
Data valid: May 23, 2023

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

http://droughtmonitor.unl.edu
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).
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USGS STREAMFLOW DATA

Wednesday, May 31, 2023 10:30ET

Below normal 28-day average streamflow

Tuesday, May 30, 2023

https://waterdata.usgs.gov/ok/nwis/rt
SOIL MOISTURE MAP

1-DAY AVERAGE 24-INCH FRACTIONAL WATER INDEX

1-day Average 24-inch Fractional Water Index

May 30, 2023

http://www.mesonet.org/index.php/weather/map/24-inch_fractional_water_index/soil_moisture
Lake Hefner and Lake Overholser are terminal storage for Canton Lake. Lake Draper is terminal storage for McGee Creek and Atoka Lakes.
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.swrwc.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). For more information, please visit the OWRB's website: (https://www.owrb.ok.gov).
• Aquifer recharge in May 2023 was 0.91 inches.

• Normal recharge for May is 0.48 inches.

• This is 0.05 inches below the cumulative yearly average at this time.
Most of the recharge for 2023 so far this year is south and east of Shawnee.

Recharge for the central Oklahoma metro area is only about 75 percent of normal.

Normal cumulative recharge for Jan-May 2023 is 1.46 inches.
ENSO CYCLE - RECENT EVOLUTION, CURRENT STATUS AND PREDICTIONS

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

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

Forecast ensemble mean
NCEI OIv2.1 daily analysis

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt
ENSO ALERT SYSTEM STATUS: El Niño Watch

- ENSO-neutral conditions are observed.
- Equatorial sea surface temperatures (SSTs) are near-to-above average across most of the Pacific Ocean.
- A transition from ENSO-neutral is expected in the next couple of months, with a greater than 90% chance of El Niño persisting into the Northern Hemisphere winter.

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt
QUESTIONS?

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ASSOCIATION OF CENTRAL OKLAHOMA GOVERNMENTS