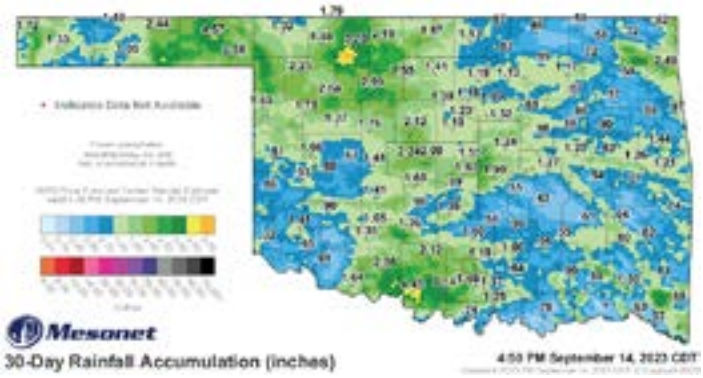
Oklahoma Water Resources Bulletin

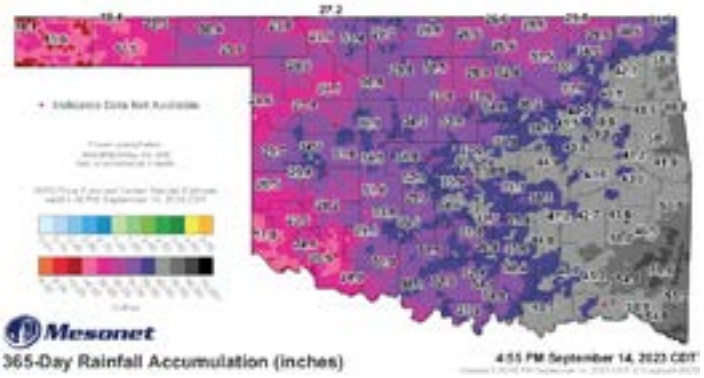
Summary of Current Conditions

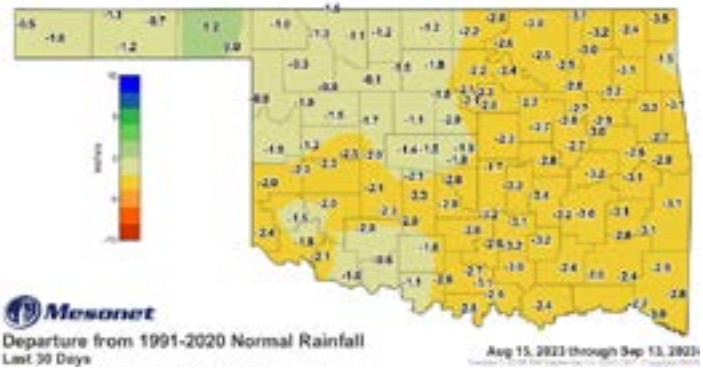
September 14, 2023

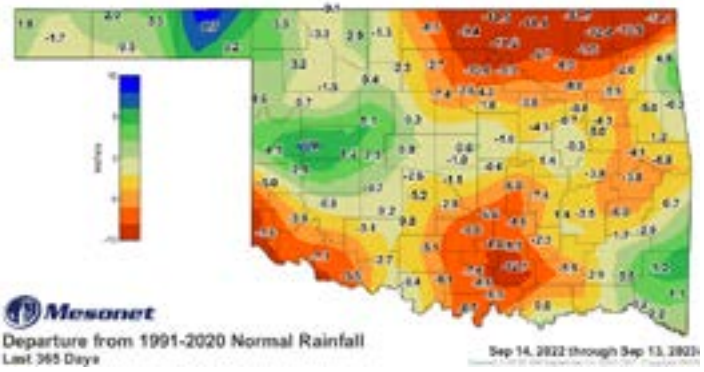
Precipitation

Last 30 Days: August 15, 2023 – September 13, 2023					Last 365 Days: September 14, 2022 – September 13, 2023			
Climate Division	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	1.67"	-0.61"	73%	39th driest	21.88"	+1.30"	106%	37th wettest
N. CENTRAL	1.58"	-1.35"	54%	28th driest	27.94"	-3.48"	89%	46th driest
NORTHEAST	0.87"	-2.76"	24%	8th driest	35.36"	-7.31"	83%	28th driest
W. CENTRAL	1.06"	-1.80"	37%	17th driest	30.30"	+1.90"	107%	25th wettest
CENTRAL	1.26"	-2.08"	38%	16th driest	34.83"	-2.80"	93%	48th wettest
E. CENTRAL	0.84"	-2.79"	23%	10th driest	43.33"	-2.81"	94%	48th wettest
SOUTHWEST	1.06"	-1.89"	36%	16th driest	26.83"	-3.44"	89%	47th driest
S. CENTRAL	0.60"	-2.70"	18%	8th driest	34.62"	-6.09"	85%	37th driest
SOUTHEAST	0.66"	-2.63"	20%	4th driest	50.39"	-0.20"	100%	51st wettest
STATEWIDE	**1.08"**	**-2.06"**	**34%**	**8th driest**	**33.70"**	**-2.77"**	**92%**	**48th driest**



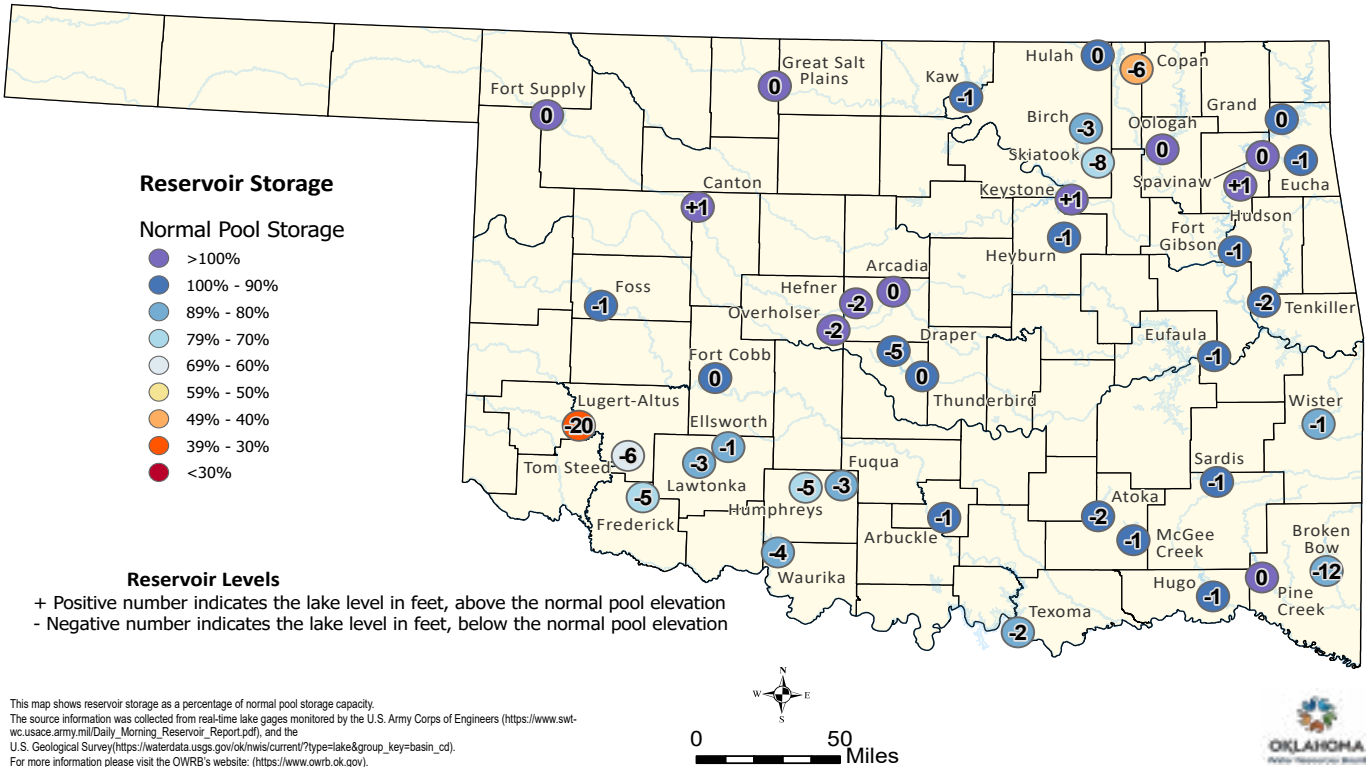






Reservoir Levels

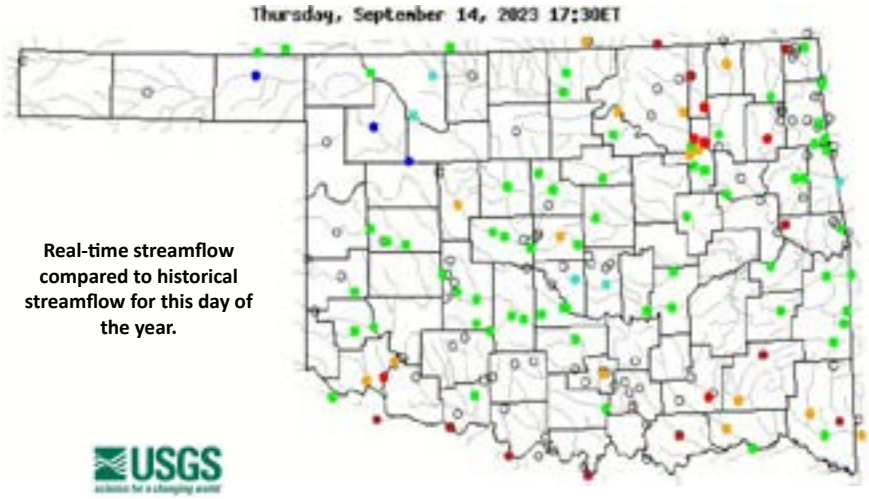
Oklahoma Reservoir Levels and Storage as of 9/11/2023



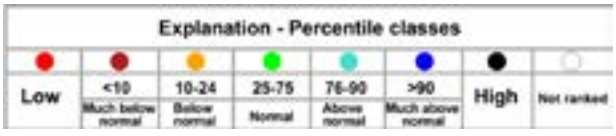
Reservoir Levels
+ Positive number indicates the lake level in feet, above the normal pool elevation
- Negative number indicates the lake level in feet, below the normal pool elevation

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(https://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd).
For more information please visit the OWRB's website: (https://www.owrb.ok.gov).

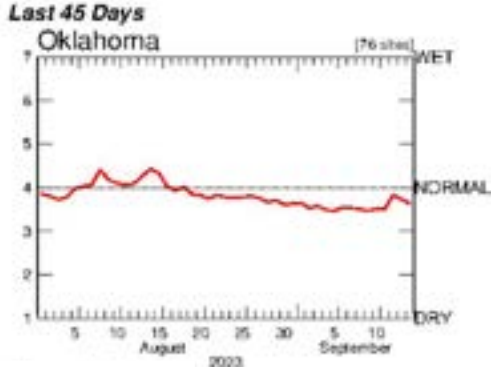
Streamflow



Real-time streamflow compared to historical streamflow for this day of the year.



Average Streamflow Index



Visit waterwatch.usgs.gov for additional real-time streamflow information.

Visit the OWRB's Water Data and Analysis Portal for continuous and discrete water quality and quantity data for Oklahoma lakes, streams, and aquifers across the state.

Drought Conditions

Palmer Drought Severity Index (PDSI)

Climate Division	Status 9/9/23	Value 8/5	Value 9/9	Change in Value
NORTHWEST	Near Normal	3.18	1.19	-1.99
NORTH CENTRAL	Near Normal	2.36	1.26	-1.1
NORTHEAST	Near Normal	-1.05	-0.89	+0.16
WEST CENTRAL	Near Normal	2.69	1.44	-1.25
CENTRAL	Near Normal	0.86	0.13	-0.73
EAST CENTRAL	Near Normal	-1.11	-1.56	-0.45
SOUTHWEST	Near Normal	-0.16	-1.24	-1.08
SOUTH CENTRAL	Near Normal	-0.48	-1.71	-1.23
SOUTHEAST	Near Normal	-0.99	-1.77	-0.78

The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland, spanning from -10 (dry) to +10 (wet). According to the latest PDSI, as of September 9, all climate regions are Near Normal.

Standardized Precipitation Index (SPI)
Through August 2023

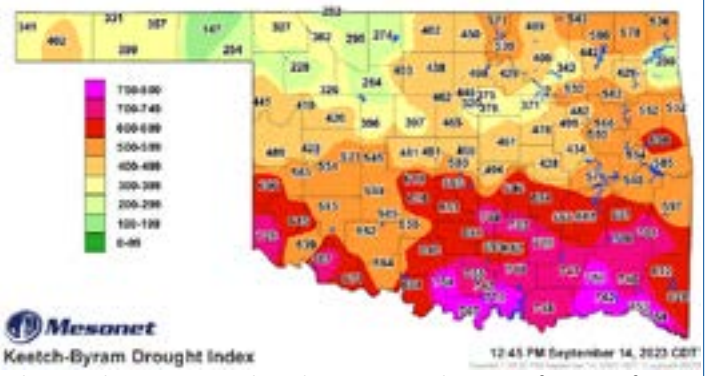
3-month	12-month	24-month
Exceptionally Moist	Abnormally Moist	Abnormally Dry
Moderately Moist	Near Normal	Moderately Dry
Near Normal	Abnormally Dry	Abnormally Dry
Exceptionally Moist	Abnormally Moist	Abnormally Dry
Moderately Moist	Near Normal	Near Normal
Near Normal	Near Normal	Near Normal
Abnormally Moist	Near Normal	Moderately Dry
Near Normal	Near Normal	Moderately Dry
Near Normal	Near Normal	Near Normal

The SPI provides a comparison of precipitation over several specified time periods with totals from the periods for all years in the historical record. Through August 2023, the Northwest, North Central, Northeast, West Central, Southwest, and South Central regions were abnormally dry or worse for the 24-month period.

Soil Moisture

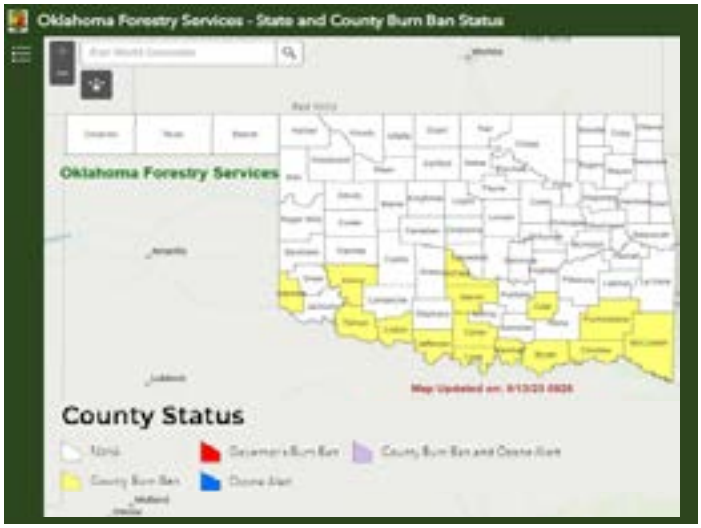
The 1-day Average 4-inch Bare Soil Fractional Water Index map displays the 24-hour-averaged soil moisture at 4 inches under bare soil for the previous day. Fractional water index ranges from 0 (as dry as the sensor can read) to 1.0 (as wet as the sensor can read).

Keetch-Byram Drought Index

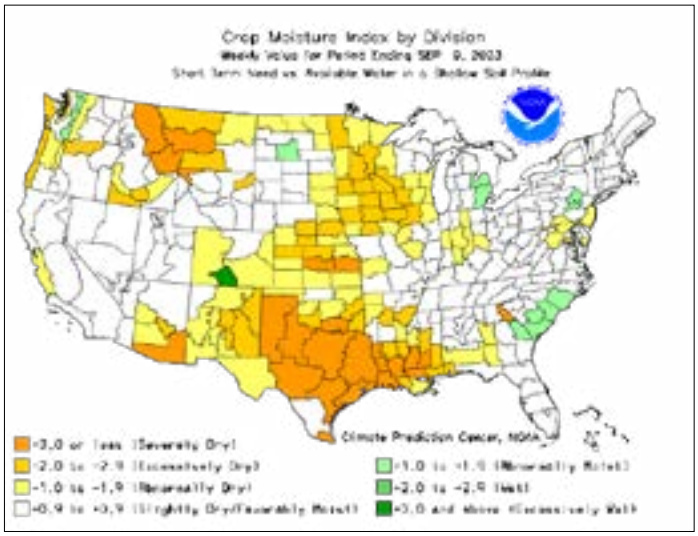


The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values > 600 are often associated with severe drought and increased wildfire occurrence.

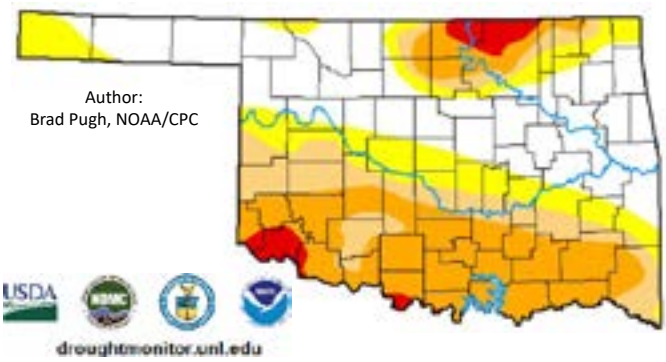
State & County Burn Ban Status



Crop Moisture Index



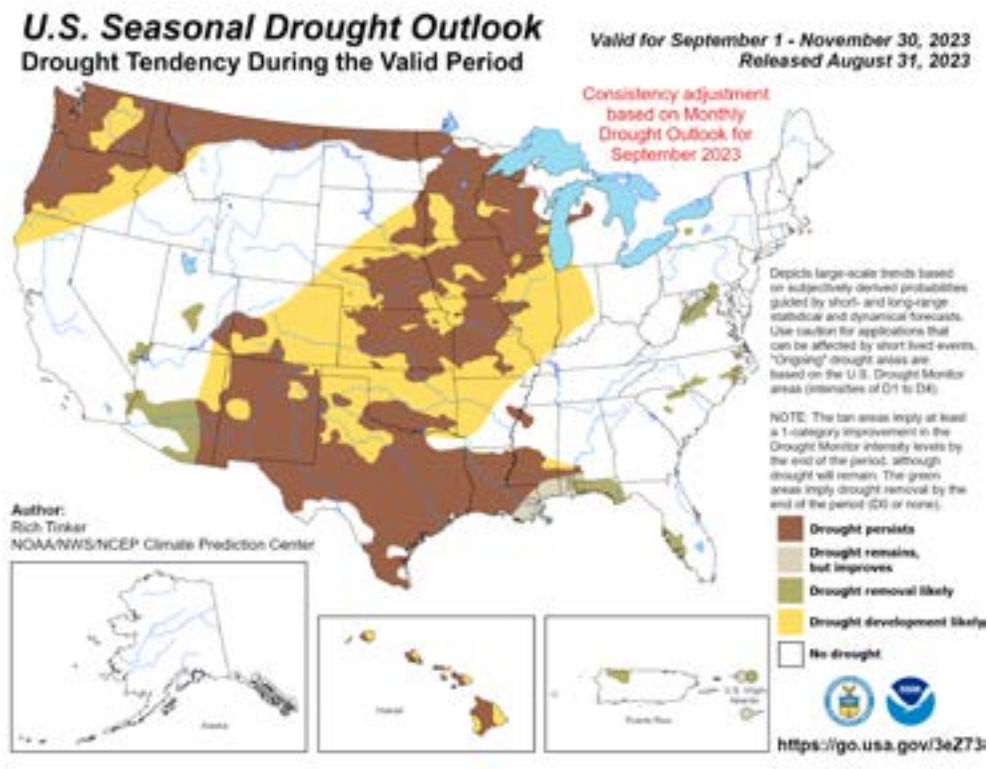
Oklahoma Drought Monitor



September 12, 2023
(Released September 14, 2023)
Valid 7 a.m. EDT

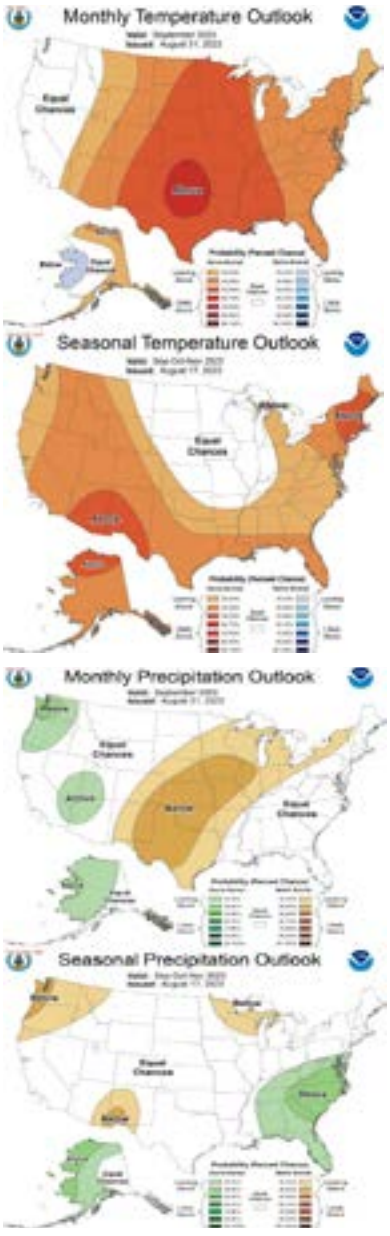
Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2023-09-12	37.93	62.07	45.00	29.80	3.51	0.00	140
Last Week to Current	2023-09-05	33.50	66.50	43.39	24.96	2.72	0.00	138
3 Months Ago to Current	2023-06-13	34.99	65.01	49.25	25.38	5.85	1.45	147
Start of Calendar Year to Current	2022-12-27	1.82	98.18	89.73	80.92	56.13	11.65	337
Start of Water Year to Current	2022-09-27	0.00	100.00	99.88	94.44	64.44	17.25	376
One Year Ago to Current	2022-09-13	0.03	99.97	96.53	85.43	48.81	3.06	334

Drought Probability



Since mid-August, there are stronger indicators for a very warm and dry September in the middle of the country; therefore, a broad area of drought development is now forecast in this region. The seasonal update forecasts this development to persist until the end of November, although with lower confidence than the September drought development forecast.

Monthly/Seasonal Outlook



NOAA/ National Weather Service
National Centers for Environmental Prediction
Climate Prediction Center