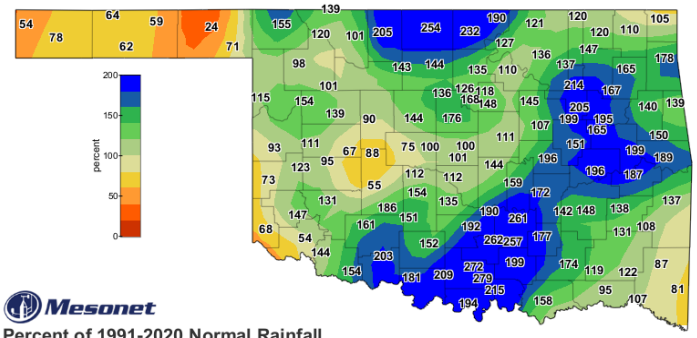
Oklahoma Water Resources Bulletin

Summary of Current Conditions

May 16, 2024

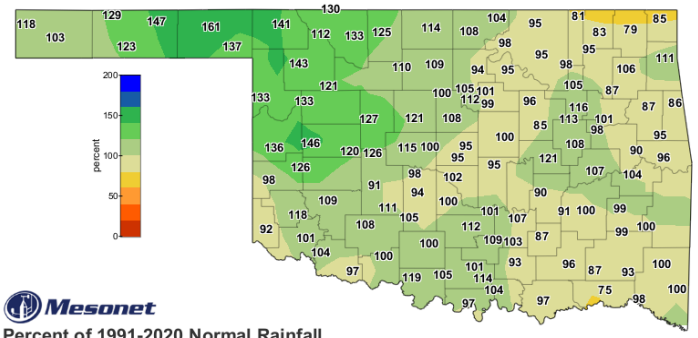
Precipitation

Last 30 Days: April 16, 2024 – May 15, 2024					Last 365 Days: May 17, 2023 – May 15, 2024				
Climate Division	**Total Rainfall (inches)**	**Departure From Normal (inches)**	**Percent of Normal**	**Rank Since 1921**	**Climate Division**	**Total Rainfall (inches)**	**Departure From Normal (inches)**	**Percent of Normal**	**Rank Since 1921**
PANHANDLE	1.56"	-0.47"	77%	43rd driest	PANHANDLE	26.01"	+5.52"	127%	11th wettest
N. CENTRAL	5.76"	+2.23"	163%	8th wettest	N. CENTRAL	35.96"	+4.68"	115%	20th wettest
NORTHEAST	7.59"	+2.67"	154%	12th wettest	NORTHEAST	40.29"	-2.20"	95%	47th wettest
W. CENTRAL	3.42"	+0.40"	113%	39th wettest	W. CENTRAL	35.58"	+7.32"	126%	8th wettest
CENTRAL	5.81"	+1.56"	137%	26th wettest	CENTRAL	37.34"	-0.12"	100%	33rd wettest
E. CENTRAL	8.76"	+3.66"	172%	12th wettest	E. CENTRAL	44.74"	-1.20"	97%	45th wettest
SOUTHWEST	4.56"	+1.13"	133%	26th wettest	SOUTHWEST	31.10"	+0.96"	103%	29th wettest
S. CENTRAL	9.53"	+4.85"	204%	6th wettest	S. CENTRAL	41.05"	+0.51"	101%	35th wettest
SOUTHEAST	6.08"	+0.51"	109%	52nd driest	SOUTHEAST	47.99"	-2.39"	95%	45th driest
STATEWIDE	**5.98"**	**+1.91"**	**147%**	**20th wettest**	**STATEWIDE**	**37.65"**	**+1.34"**	**104%**	**29th wettest**



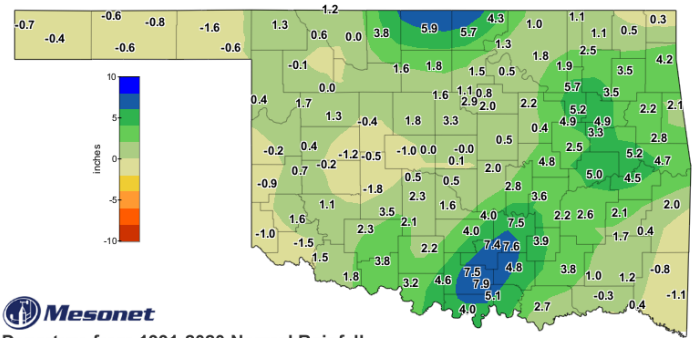
Percent of 1991-2020 Normal Rainfall
Last 30 Days

Apr 16, 2024 through May 15, 2024



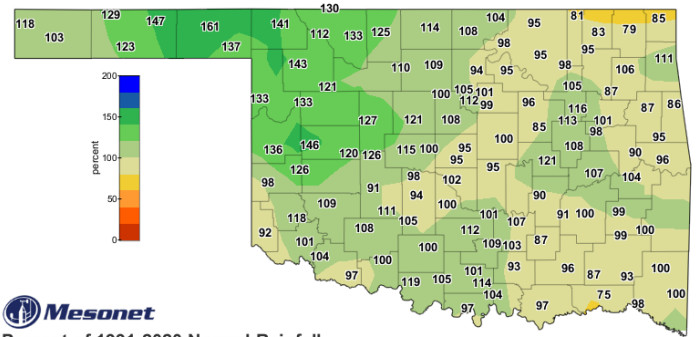
Percent of 1991-2020 Normal Rainfall
Last 365 Days

May 17, 2023 through May 15, 2024



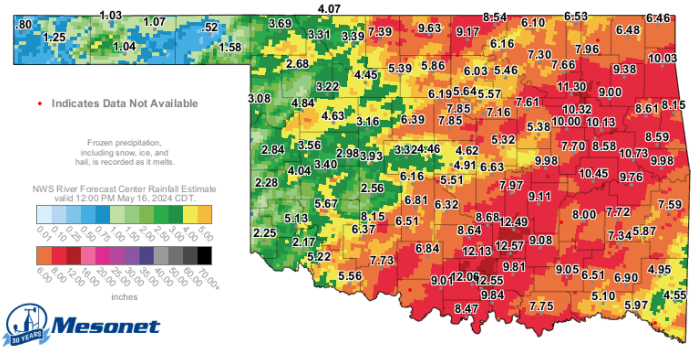
Departure from 1991-2020 Normal Rainfall
Last 30 Days

Apr 16, 2024 through May 15, 2024



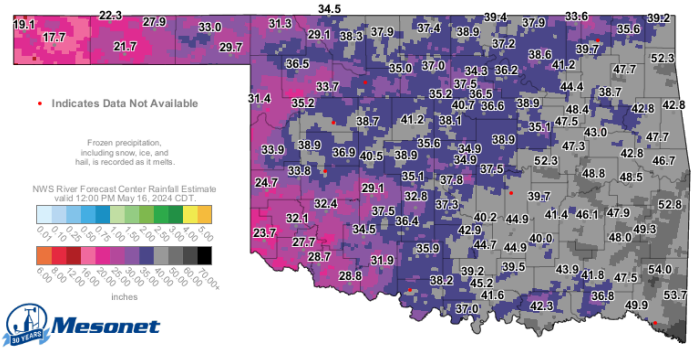
Percent of 1991-2020 Normal Rainfall
Last 365 Days

May 17, 2023 through May 15, 2024



30-Day Rainfall Accumulation (inches)

1:10 PM May 16, 2024 CDT

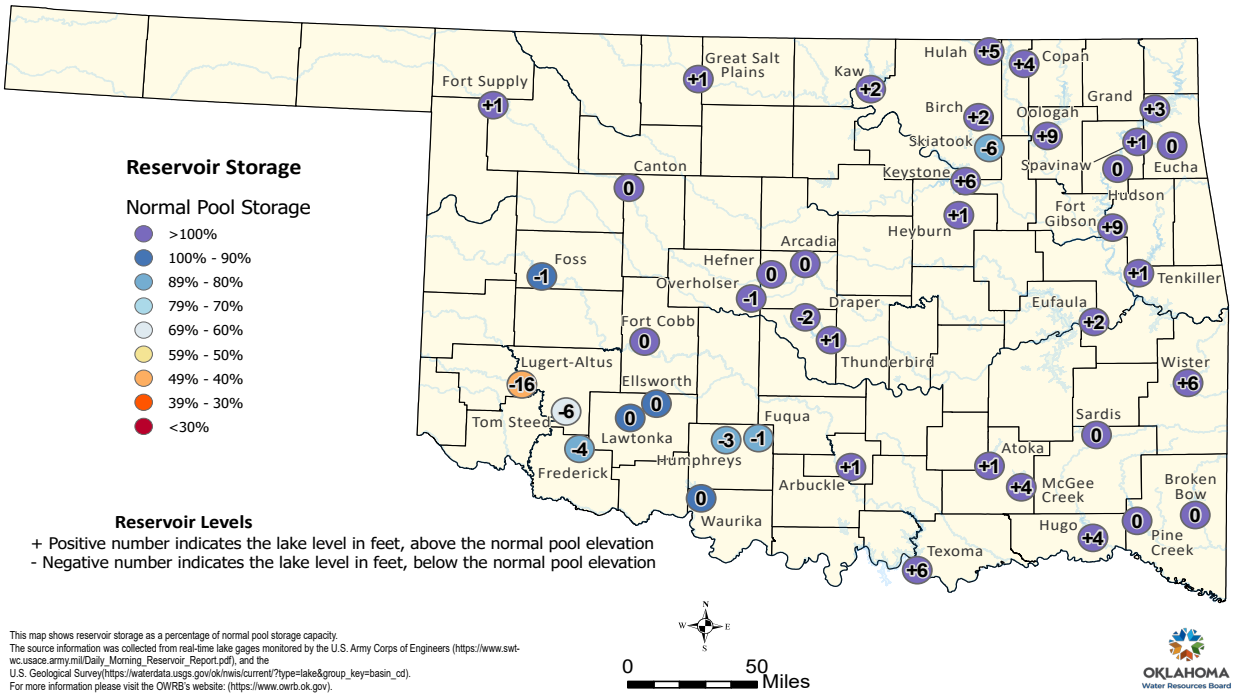


365-Day Rainfall Accumulation (inches)

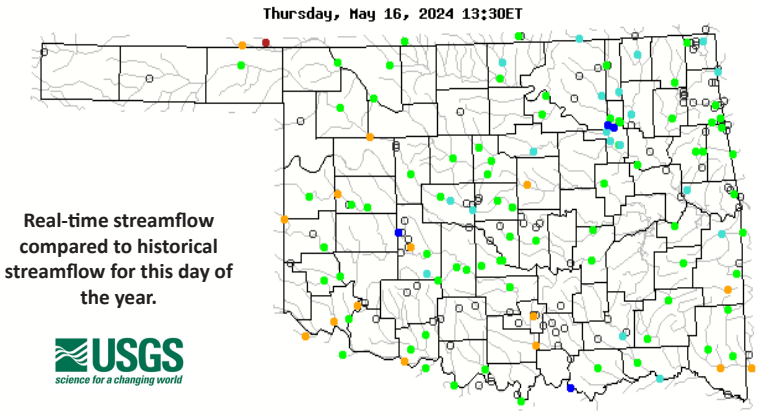
1:10 PM May 16, 2024 CDT

Reservoir Levels

Oklahoma Reservoir Levels and Storage as of 5/13/2024

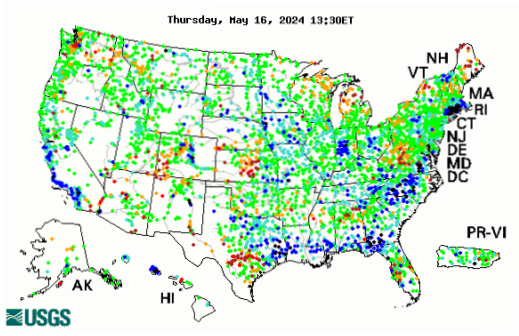


Streamflow



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

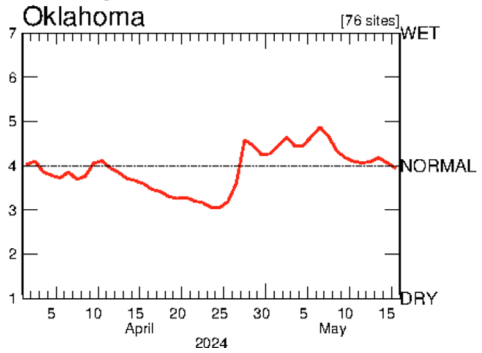
USGS science for a changing world



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

Average Streamflow Index

Last 45 Days



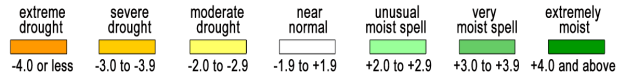
Visit waterwatch.usgs.gov for additional real-time streamflow information.

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)

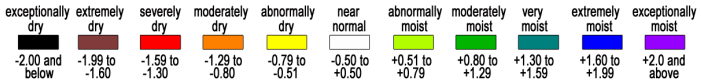
Climate Division	Status 05/11/24	Value 04/06	Value 05/11	Change in Value
PANHANDLE	Near Normal	0.85	-1.03	-1.88
NORTH CENTRAL	Near Normal	1.74	1.89	0.15
NORTHEAST	Near Normal	-0.41	0.94	1.35
WEST CENTRAL	Unusually Moist	1.87	2	0.13
CENTRAL	Unusually Moist	1.51	2.14	0.63
EAST CENTRAL	Near Normal	-0.18	1.77	1.95
SOUTHWEST	Unusually Moist	0.92	2.21	1.29
SOUTH CENTRAL	Unusually Moist	0.74	2.3	1.56
SOUTHEAST	Near Normal	0.76	1.83	1.07



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 May 11, all climate regions are Near Normal or wetter.

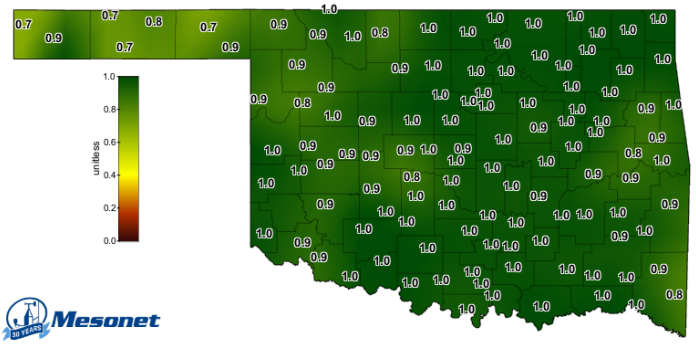
Standardized Precipitation Index (SPI)
Through April 2024

Climate Division	3-month	12-month	24-month
PANHANDLE	Severely Dry	Very Moist	Near Normal
NORTH CENTRAL	Moderately Dry	Abnormally Moist	Near Normal
NORTHEAST	Near Normal	Near Normal	Near Normal
WEST CENTRAL	Abnormally Dry	Moderately Moist	Near Normal
CENTRAL	Near Normal	Abnormally Moist	Near Normal
EAST CENTRAL	Near Normal	Near Normal	Near Normal
SOUTHWEST	Near Normal	Near Normal	Near Normal
SOUTH CENTRAL	Moderately Moist	Near Normal	Near Normal
SOUTHEAST	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 April 2024, the Panhandle region was Severely Dry, the North Central region was Moderately Dry, and the West Central region was Abnormally Dry for the 3-month period.

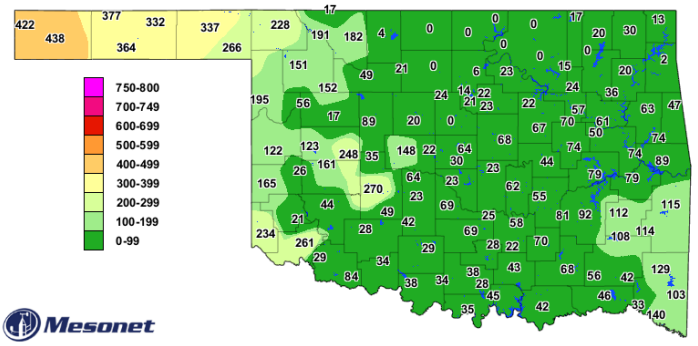
Soil Moisture



1-day Average 4-inch Bare Soil Fractional Water Index May 15, 2024

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).

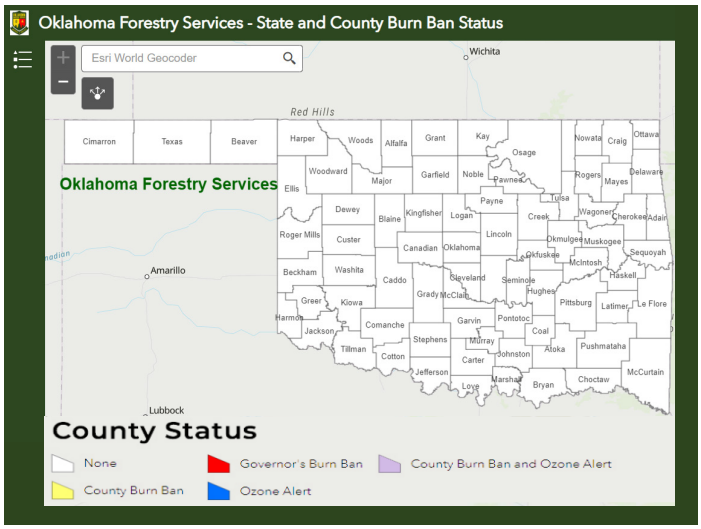
Keetch-Byram Drought Index



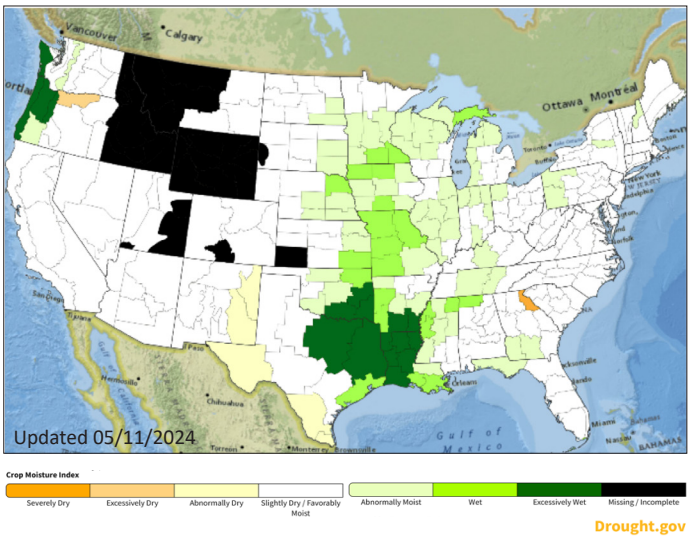
Keetch-Byram Drought Index 2:00 PM May 16, 2024 CDT

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

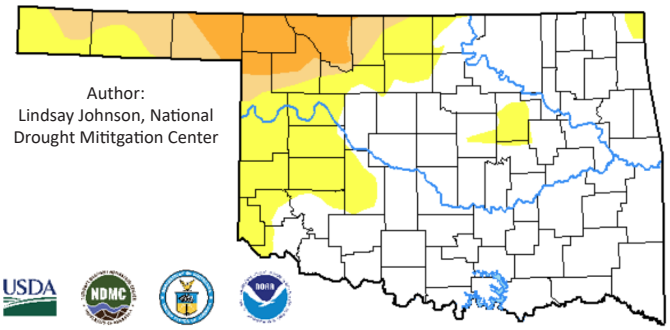
74
counties with USDA Drought Disaster Designations (primary)
— 0 counties since last week

~55,000
Oklahoma residents in areas of drought, according to the Drought Monitor
↓ 64.2% since last week

49th
wettest April on record (since 1895)
3.67 in. total precipitation
↑ 0.25 in. from normal

48th
wettest January—April on record (since 1895)
9.53 in. total precipitation
↑ 0.59 in. from normal

Statistics valid as of 5/14/24



Author:
Lindsay Johnson, National Drought Mititgation Center

May 14, 2024
(Released May 16, 2024)
Valid 7 a.m. EDT

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. See accompanying text summary for forecast statements.

D0 - Abnormally Dry
- Crops are stressed (wheat, canola, alfalfa, pecans); winter wheat germination is delayed
- Stock pond levels decline

D1 - Moderate Drought
- Summer crop and forage yields are reduced
- Wildfire risk increases
- Lake recreation activities are affected; deer reproduction is poor

D2 - Severe Drought
- Dryland crops are severely reduced; pasture growth is stunted
- Cattle are stressed
- Burn bans begin

D3 - Extreme Drought
- Grasses are dormant, and hay is nonexistent; planting is delayed; fields are spotty; emergency CRP grazing is authorized
- Cattle have little water and feed
- Wildfires are increasing in number and severity; air quality is poor, with dust storms and smoke

D4 - Exceptional Drought
- Ground is cracking; farmers are bailing failed crops or abandoning fields; pastures are bare; land is abandoned
- Cost of hay and water is high and supplies are scarce; producers are liquidating herds
- Burn restrictions increase; fire season is long

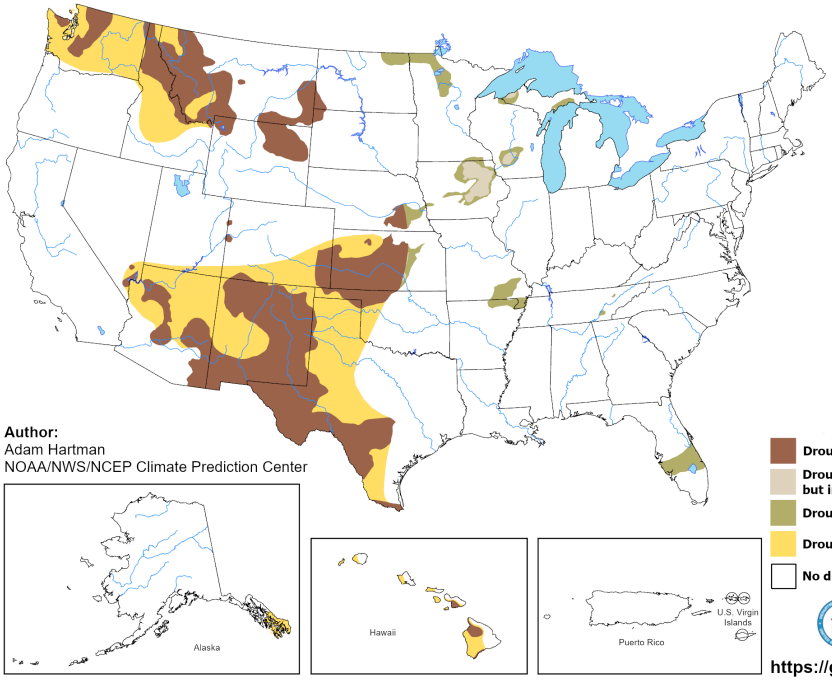
droughtmonitor.unl.edu

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-05-14	67.36	32.64	12.13	5.91	0.00	0.00	51
Last Week to Current	2024-05-07	51.62	48.38	20.41	5.91	0.00	0.00	75
3 Months Ago to Current	2024-02-13	83.39	16.61	3.23	0.19	0.00	0.00	20
Start of Calendar Year to Current	2023-12-26	53.62	46.38	21.64	3.08	0.00	0.00	71
Start of Water Year to Current	2023-09-26	34.29	65.71	46.76	30.93	12.91	0.00	156
One Year Ago to Current	2023-05-16	44.21	55.79	50.19	43.81	30.67	8.88	189

Drought Probability

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

Valid for May 16 - August 31, 2024
Released May 16, 2024



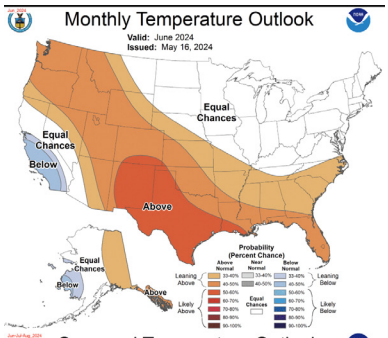
Author:
Adam Hartman
NOAA/NWS/NCEP Climate Prediction Center

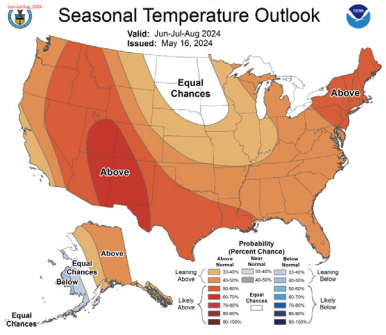
- Drought persists
- Drought remains, but improves
- Drought removal likely
- Drought development likely
- No drought

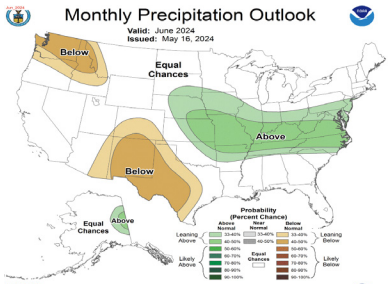
https://go.usa.gov/3eZ73

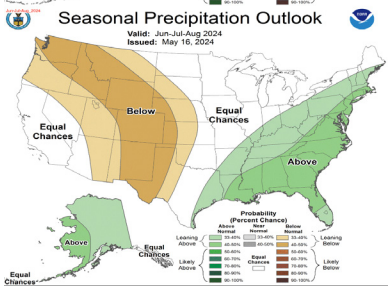
The map depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4). Tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. Green areas imply drought removal by the end of the period.

Monthly/Seasonal Outlook









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