

Oklahoma Water Resources Bulletin

Summary of Current Conditions

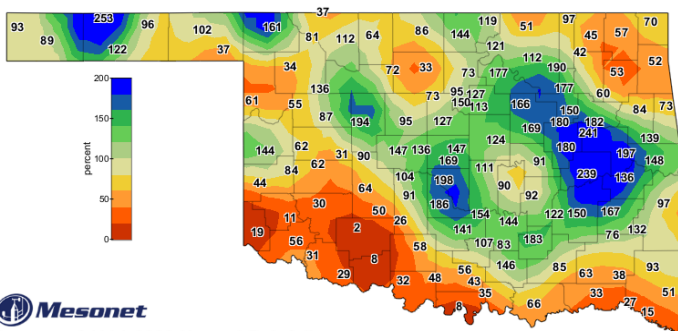
August 16, 2024

Precipitation

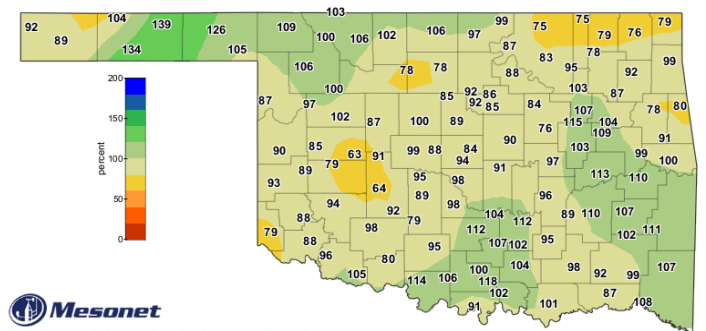
Last 30 Days: July 17, 2024, through August 15, 2024

Last 365 Days: August 17, 2023, through August 15, 2024

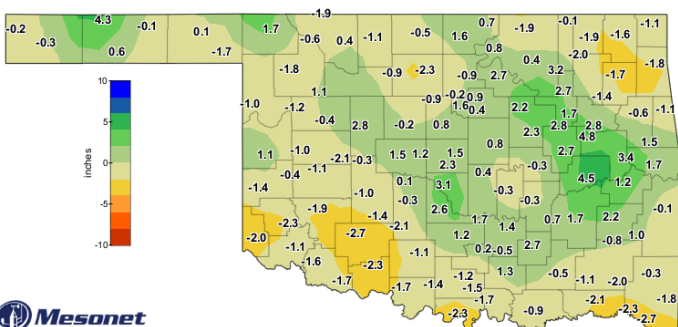
Climate Division	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Climate Division	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	RANK SINCE 1921
PANHANDLE	3.07"	+0.44"	117%	32nd wettest	PANHANDLE	21.27"	+0.78"	104%	43rd wettest
N. CENTRAL	2.59"	-0.22"	92%	52nd driest	N. CENTRAL	29.78"	-1.53"	95%	46th wettest
NORTHEAST	3.64"	+0.51"	116%	46th wettest	NORTHEAST	37.09"	-5.48"	87%	42nd driest
W. CENTRAL	2.36"	-0.09"	96%	45th wettest	W. CENTRAL	23.91"	-4.39"	85%	40th driest
CENTRAL	4.05"	+1.28"	146%	23rd wettest	CENTRAL	33.19"	-4.34"	88%	45th driest
E. CENTRAL	5.28"	+2.22"	172%	15th wettest	E. CENTRAL	45.70"	-0.35"	99%	44th wettest
SOUTHWEST	0.97"	-1.28"	43%	24th driest	SOUTHWEST	26.19"	-3.99"	87%	45th driest
S. CENTRAL	2.53"	+0.16"	107%	41st wettest	S. CENTRAL	41.57"	+0.94"	102%	33rd wettest
SOUTHEAST	2.40"	-0.64"	79%	40th driest	SOUTHEAST	51.07"	+0.55"	101%	43rd wettest
STATEWIDE	3.06"	+0.33"	112%	42nd wettest	STATEWIDE	34.34"	-2.04"	94%	49th wettest



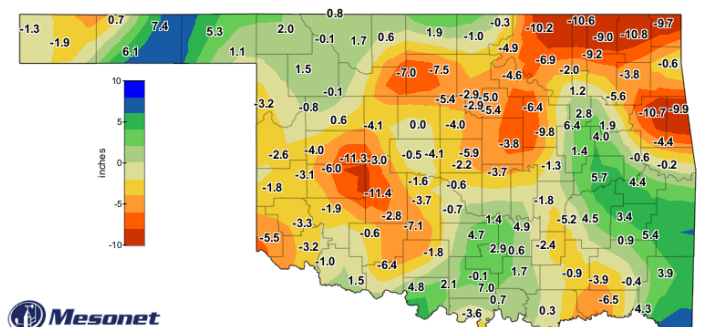
Mesonet
Percent of 1991-2020 Normal Rainfall
Last 30 Days
Jul 17, 2024 through Aug 15, 2024
Created 3:41:08 AM August 16, 2024 CDT. Copyright 2024



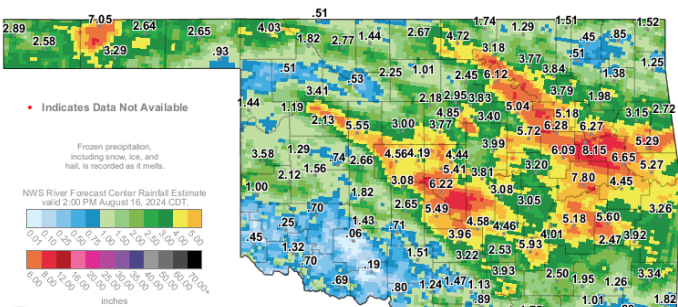
Mesonet
Percent of 1991-2020 Normal Rainfall
Last 365 Days
Aug 17, 2023 through Aug 15, 2024
Created 3:41:53 AM August 16, 2024 CDT. Copyright 2024



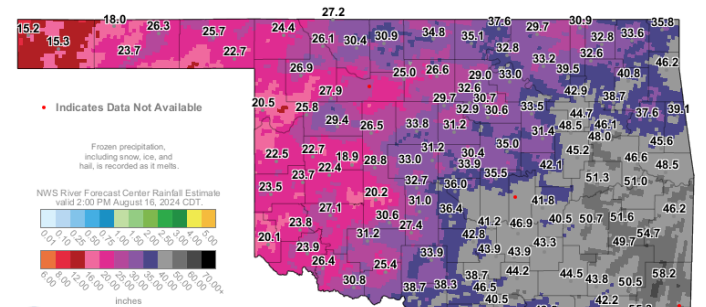
Mesonet
Departure from 1991-2020 Normal Rainfall
Last 30 Days
Jul 17, 2024 through Aug 15, 2024
Created 3:41:08 AM August 16, 2024 CDT. Copyright 2024



Mesonet
Departure from 1991-2020 Normal Rainfall
Last 365 Days
Aug 17, 2023 through Aug 15, 2024
Created 3:41:52 AM August 16, 2024 CDT. Copyright 2024



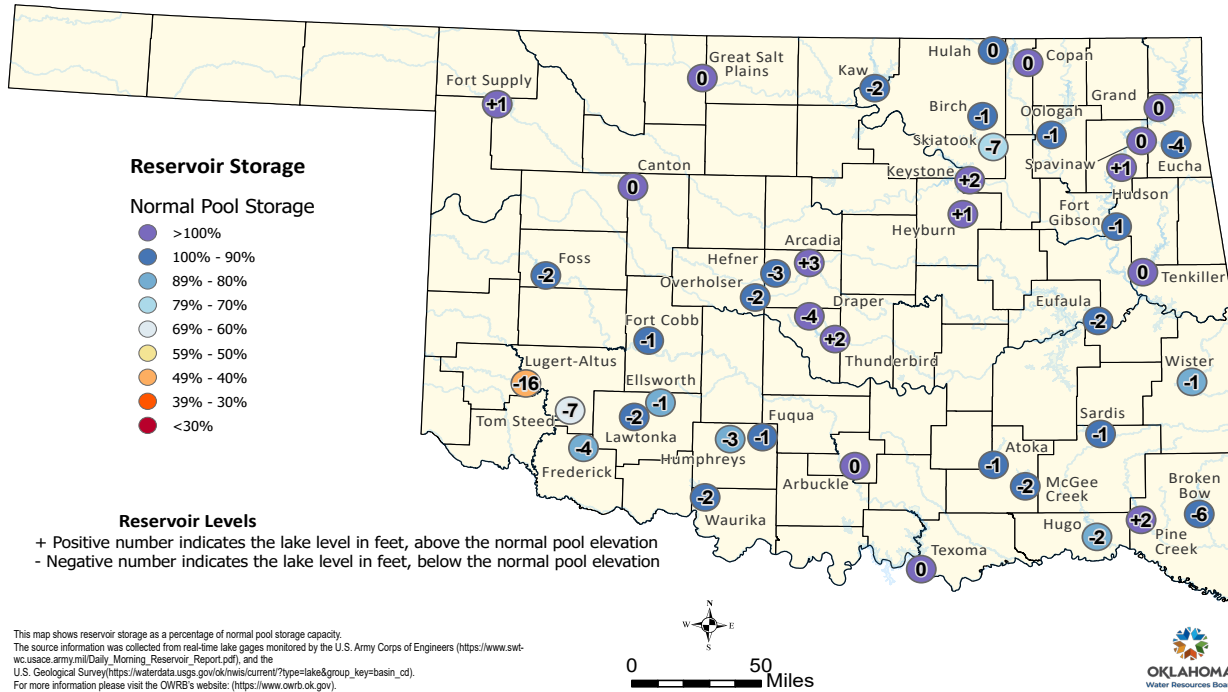
Mesonet
30-Day Rainfall Accumulation (inches)
3:25 PM August 16, 2024 CDT
Created 3:32:41 PM August 16, 2024 CDT. Copyright 2024



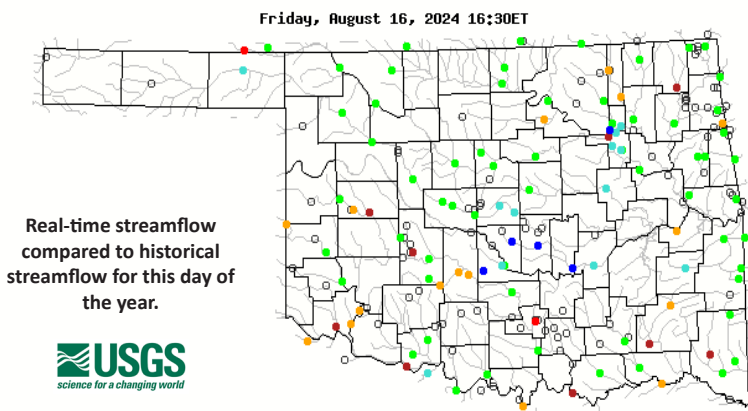
Mesonet
365-Day Rainfall Accumulation (inches)
3:25 PM August 16, 2024 CDT
Created 3:32:42 PM August 16, 2024 CDT. Copyright 2024

Reservoir Levels

Oklahoma Reservoir Levels and Storage as of 8/12/2024



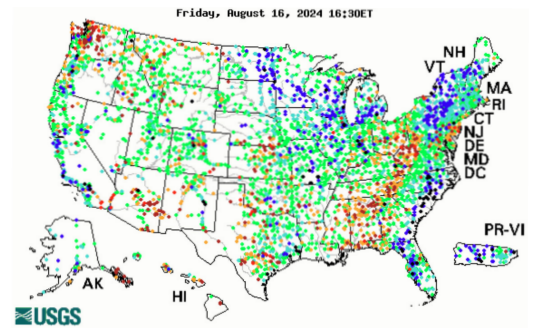
Streamflow



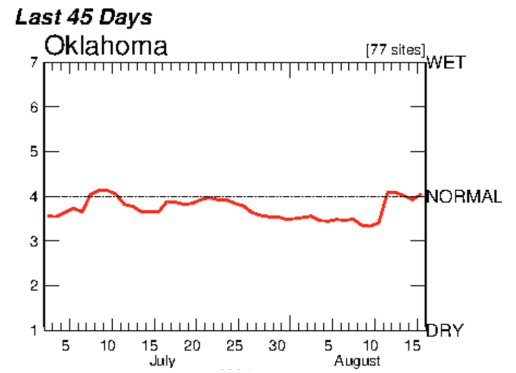
Explanation - Percentile classes							
●	●	●	●	●	●	●	●
Low	<10 <small>Much below normal</small>	10-24 <small>Below normal</small>	25-75 <small>Normal</small>	76-90 <small>Above normal</small>	>90 <small>Much above normal</small>	High	Not ranked

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.



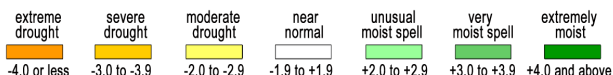
Average Streamflow Index



Drought Conditions

Palmer Drought Severity Index (PDSI)

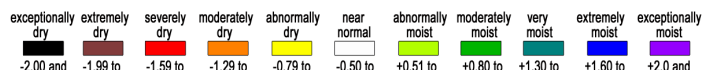
Climate Division	Status 08/10/24	Value 07/06	Value 08/10	Change in Value
PANHANDLE	Severe Drought	-2.94	-3.87	-0.93
NORTH CENTRAL	Near Normal	1.24	-1.69	-2.93
NORTHEAST	Near Normal	2.51	-1.73	-4.24
WEST CENTRAL	Near Normal	-0.77	-1.85	-1.08
CENTRAL	Near Normal	2.75	0.23	-2.52
EAST CENTRAL	Near Normal	2.66	-1.25	-3.91
SOUTHWEST	Severe Drought	-1.56	-3.72	-2.16
SOUTH CENTRAL	Severe Drought	-1.64	-3.44	-1.8
SOUTHEAST	Moderate Drought	-0.73	-2.5	-1.77



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 August 10, 2024, the Panhandle, Southwest, and South Central regions are in Severe drought, and the Southeast region is in Moderate Drought.

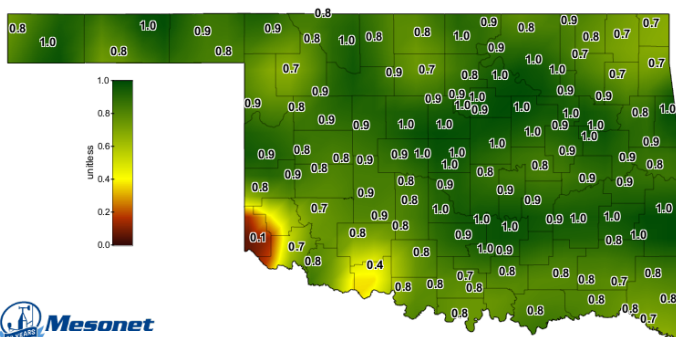
Standardized Precipitation Index (SPI) Through July 2024

Climate Division	3-month	12-month	24-month
PANHANDLE	Moderately Moist	Abnormally Moist	Abnormally Moist
NORTH CENTRAL	Near Normal	Near Normal	Near Normal
NORTHEAST	Near Normal	Near Normal	Abnormally Dry
WEST CENTRAL	Near Normal	Near Normal	Near Normal
CENTRAL	Near Normal	Near Normal	Near Normal
EAST CENTRAL	Near Normal	Near Normal	Near Normal
SOUTHWEST	Near Normal	Near Normal	Near Normal
SOUTH CENTRAL	Near Normal	Abnormally Moist	Abnormally Moist
SOUTHEAST	Near Normal	Near Normal	Abnormally Moist



The **SPI** provides a comparison of precipitation over several specified time periods with totals for the periods for all years in the historical record. Through July 2024, the Northeast region was Abnormally Dry for the 24-month period.

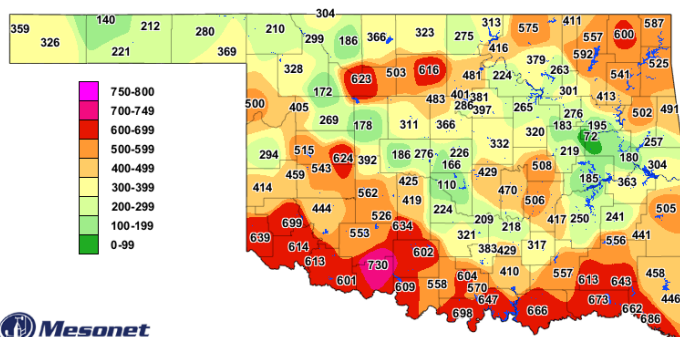
Soil Moisture



1-day Average 4-inch Bare Soil Fractional Water Index August 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).

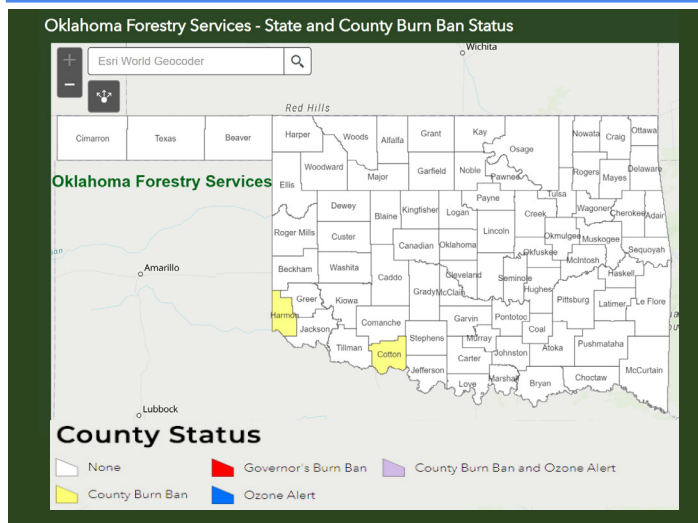
Keetch-Byram Drought Index



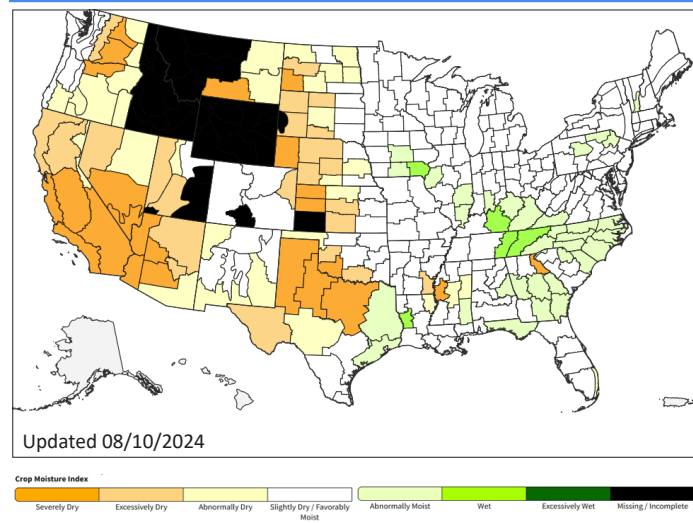
Keetch-Byram Drought Index 4:30 PM August 16, 2024 CDT

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

18
counties with USDA
Drought Disaster
Designations (primary)
— 0 counties since last
week

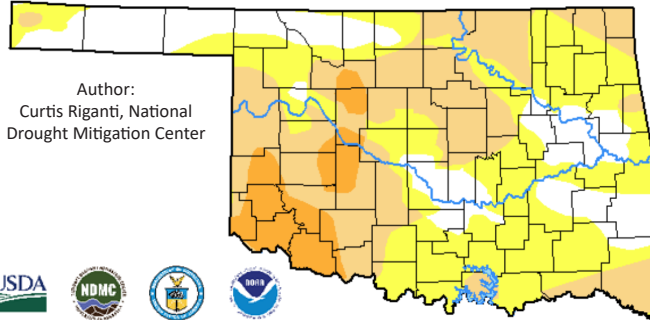
1.0 Million
Oklahoma residents in
areas of drought,
according to the Drought
Monitor
↓ 49.7% since last week

55th
wettest July on record
(since 1895)
3.14 in. total precipitation
↑ 0.29 in. from normal

53rd
wettest January—July on
record (since 1895)
21.87 in. total
precipitation
↑ 1.22 in. from normal

- 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

Statistics valid as of 08/13/24



Author:
Curtis Riganti, National
Drought Mitigation Center



August 13, 2024
(Released August 15, 2024)
Valid 7 a.m. EDT

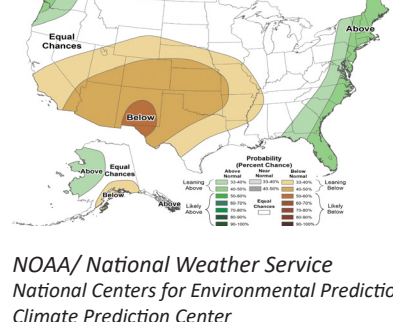
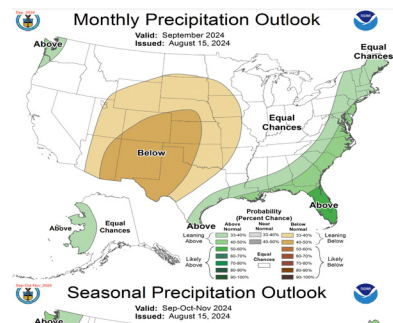
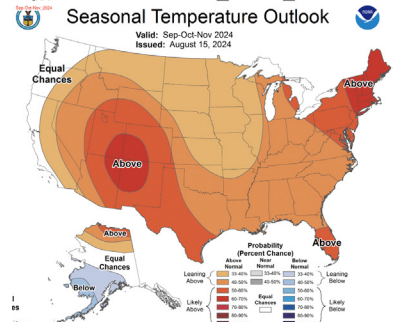
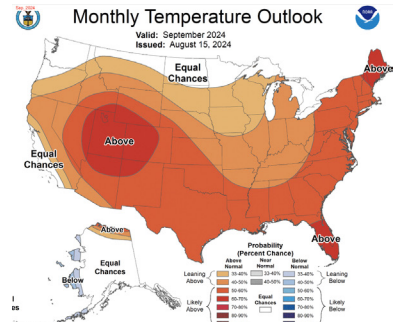
Intensity:

- 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.

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2024-08-13	20.59	79.41	40.51	8.61	0.00	0.00	129
Last Week to Current	2024-08-06	13.53	86.47	43.79	5.40	0.00	0.00	136
3 Months Ago to Current	2024-05-14	67.36	32.64	12.13	5.91	0.00	0.00	51
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	2023-08-15	64.01	35.99	12.75	5.35	1.60	0.00	56

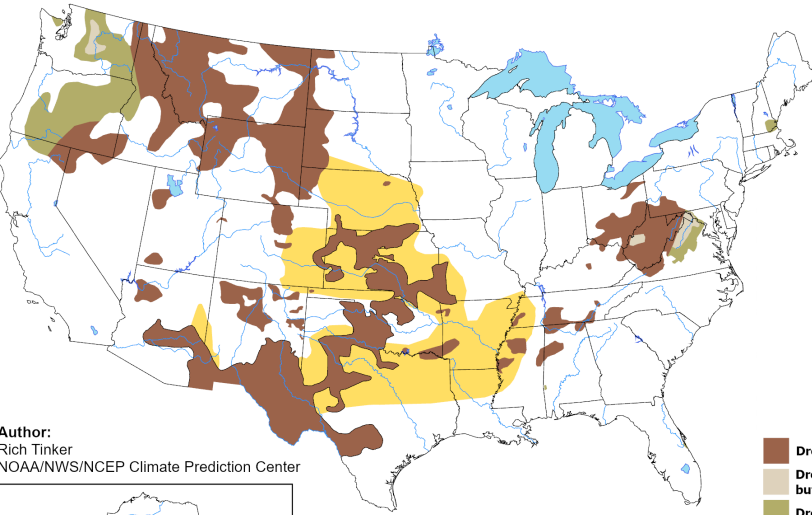
Monthly/Seasonal Outlook



Drought Probability

U.S. Seasonal Drought Outlook

Valid for August 15 - November 30, 2024
Released August 15, 2024



Author:
Rich Tinker
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.

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