Oklahoma Water Resources Bulletin
& Summary of Current Conditions

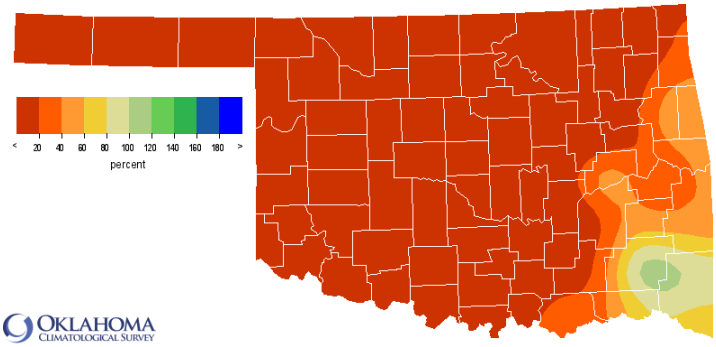
OWRB the water agency

February 15, 2018

Precipitation

Statewide Precipitation

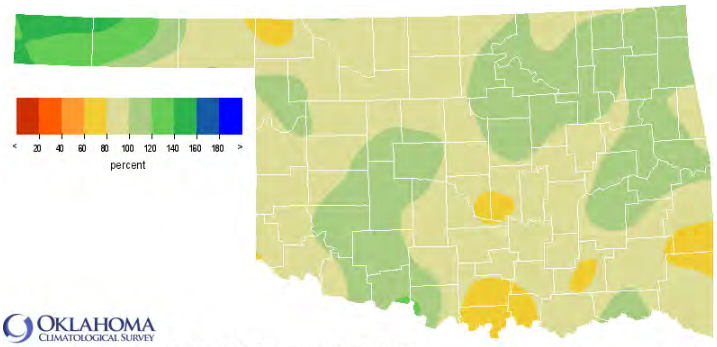
Climate Division	Last 30 Days January 16 – February 14, 2018 Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days February 15, 2017 – February 14, 2018 Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	0.00"	-0.64"	0%	1st driest	22.59"	+2.01"	110%	25th wettest
NORTH CENTRAL	0.04"	-1.05"	4%	2nd driest	29.08"	-2.34"	93%	48th driest
NORTHEAST	0.10"	-1.73"	5%	2nd driest	44.63"	+1.96"	105%	32nd wettest
WEST CENTRAL	0.00"	-1.04"	0%	1st driest	27.71"	-0.69"	98%	38th wettest
CENTRAL	0.01"	-1.64"	1%	1st driest	36.75"	-0.88"	98%	39th wettest
EAST CENTRAL	0.61"	-1.80"	25%	8th driest	46.57"	+0.43"	101%	35th wettest
SOUTHWEST	0.03"	-1.27"	3%	4th driest	31.41"	+1.14"	104%	27th wettest
SOUTH CENTRAL	0.14"	-1.99"	7%	2nd driest	34.32"	-6.39"	84%	32nd driest
SOUTHEAST	2.33"	-0.90"	72%	39th driest	47.02"	-3.57"	93%	41st driest
STATEWIDE	0.32"	-1.37"	19%	5th driest	35.53"	-0.94"	97%	39th wettest



OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Jan 16, 2018 through Feb 14, 2018



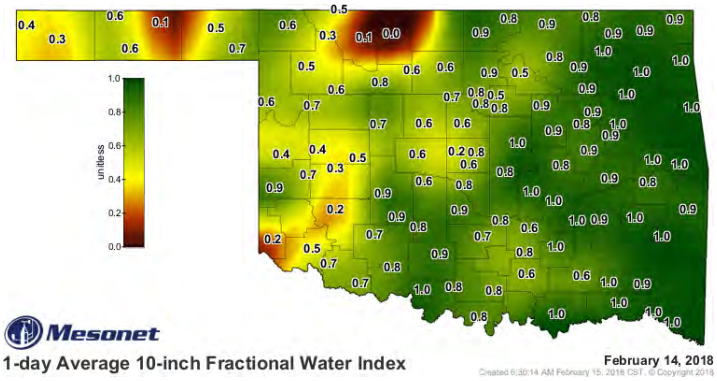
OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Feb 15, 2017 through Feb 14, 2018

Soil Moisture

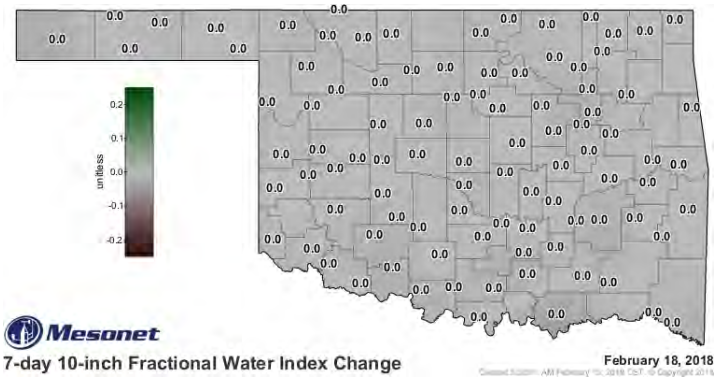
Fractional Water Index
February 14, 2018



Mesonet

1-day Average 10-inch Fractional Water Index

February 14, 2018



Mesonet

7-day 10-inch Fractional Water Index Change

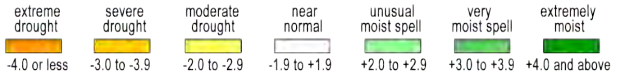
February 18, 2018

The Fractional Water Index ranges from very dry soil having a value of 0 to soil at field capacity illustrated by a value of 1. [1.0-0.8 = Enhanced Growth; 0.8-0.5 = Limited Growth; 0.5-0.3 = Plants Wilting; 0.3-0.1 = Plants Dying; <0.1 = Barren Soil.]

Drought Indices

Palmer Drought Severity Index (PDSI)

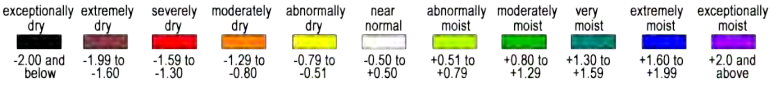
Climate Division	Status 1/6/18	Value 1/6	Value 2/10	Change in Value
NORTHWEST	Near Normal	-0.1	-1.22	1.12(-)
NORTH CENTRAL	Near Normal	-0.94	-1.31	0.37(-)
NORTHEAST	Near Normal	-0.48	-1.11	0.63(-)
WEST CENTRAL	Near Normal	-0.54	-1.37	0.83(-)
CENTRAL	Near Normal	-0.46	-1.19	0.73(-)
EAST CENTRAL	Near Normal	-0.33	-0.93	0.6(-)
SOUTHWEST	Near Normal	1.01	-0.26	1.27(-)
SOUTH CENTRAL	Near Normal	-0.63	-1.35	0.72(-)
SOUTHEAST	Near Normal	-0.3	-0.28	-0.02(+)



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, all climate regions in the state are experiencing near normal conditions.

Standardized Precipitation Index (SPI)
Through January 2018

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



The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. All regions are shown to be Moderately Dry or worse for the 3-month period, but Near Normal or wetter for the 12- and 24-month periods.

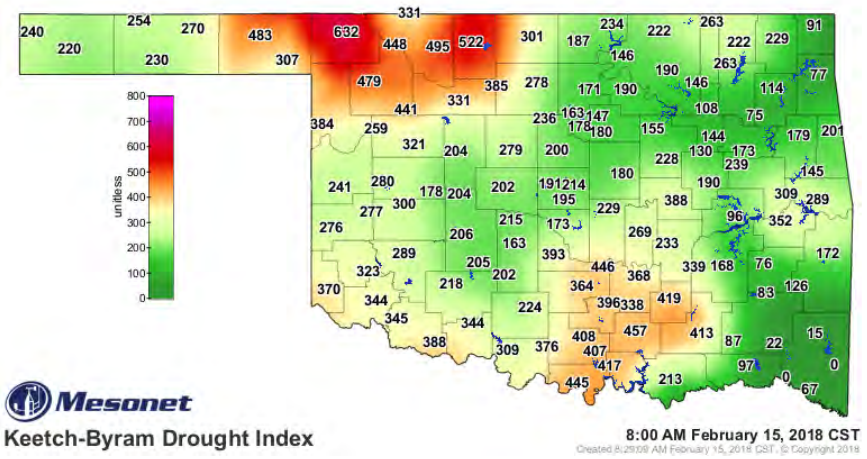
Keetch-Byram Drought Fire Index

February 15, 8:00 a.m.--1 station is above 600.

STATION	REGION	KBDI
Buffalo	Northwest	632

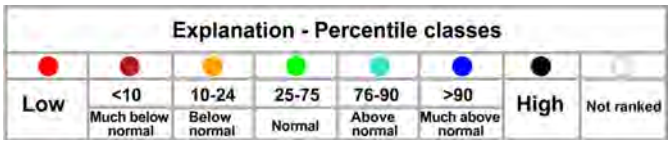
One station was above 600 on Jan. 15, 2018.

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 of 600 and above are often associated with more severe drought and increased wildfire occurrence.

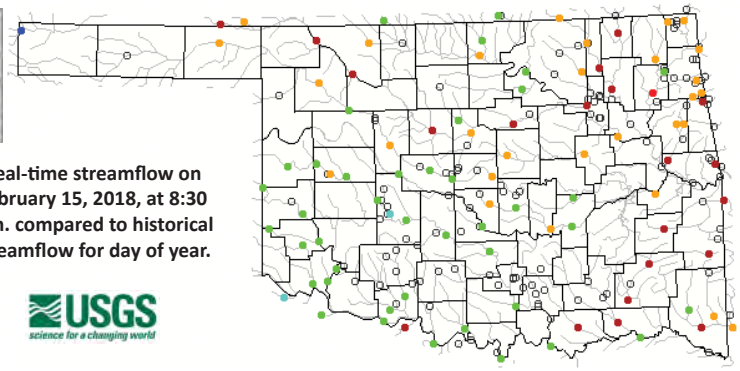


Streamflow Conditions

February 15, 2018



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



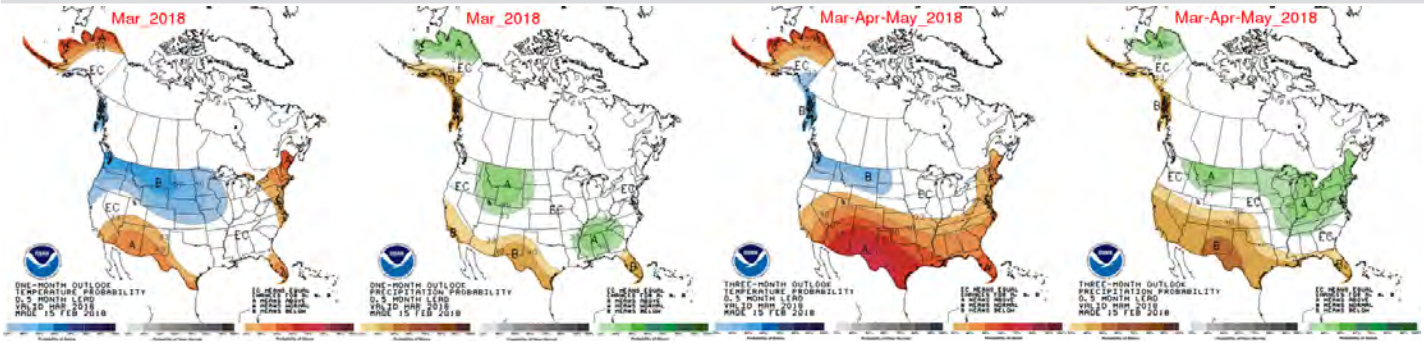
Real-time streamflow on February 15, 2018, at 8:30 a.m. compared to historical streamflow for day of year.

USGS science for a changing world

Weather/Drought Forecast

Seasonal Outlook

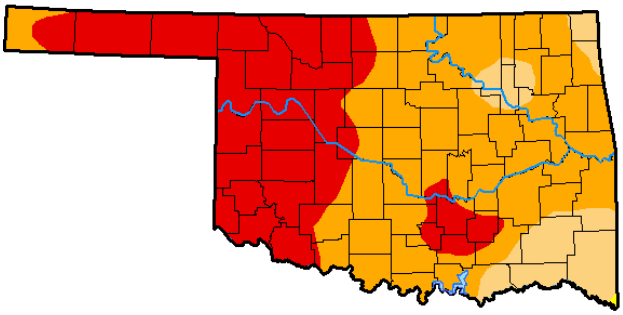
Temperature | Precipitation | Temperature | Precipitation



The contours on the maps show the total probability of three categories—above, indicated by the letter "A"; and below, indicated by the letter "B". "EC" indicates "Equal Chances" for A or B.

Drought Summary & Outlook

U.S. Drought Monitor
Oklahoma



February 13, 2018
(Released Thursday, Feb. 15, 2018)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.92	88.91	37.80	0.00
Last Week 02-06-2018	0.00	100.00	99.93	88.40	37.76	0.00
3 Months Ago 11-14-2017	54.09	45.91	17.34	2.00	0.00	0.00
Start of Calendar Year 01-02-2018	0.00	100.00	77.15	38.76	0.00	0.00
Start of Water Year 09-26-2017	64.46	35.54	0.77	0.00	0.00	0.00
One Year Ago 02-14-2017	5.15	94.85	73.84	30.14	3.34	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

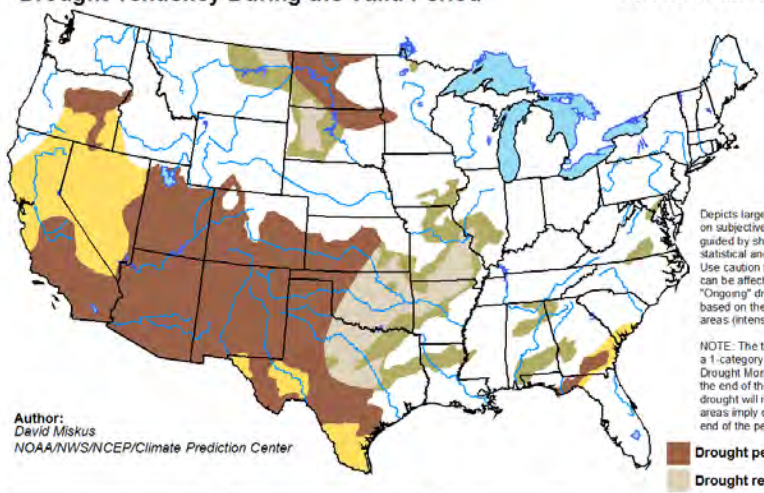
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Eric Luebehusen
U.S. Department of Agriculture

http://droughtmonitor.unl.edu/

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

Valid for February 15 - May 31, 2018
Released February 15, 2018



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).

- **Drought persists**
- **Drought remains but improves**
- **Drought removal likely**
- **Drought development likely**

Author:
David Miskus
NOAA/NWS/NCEP/Climate Prediction Center

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

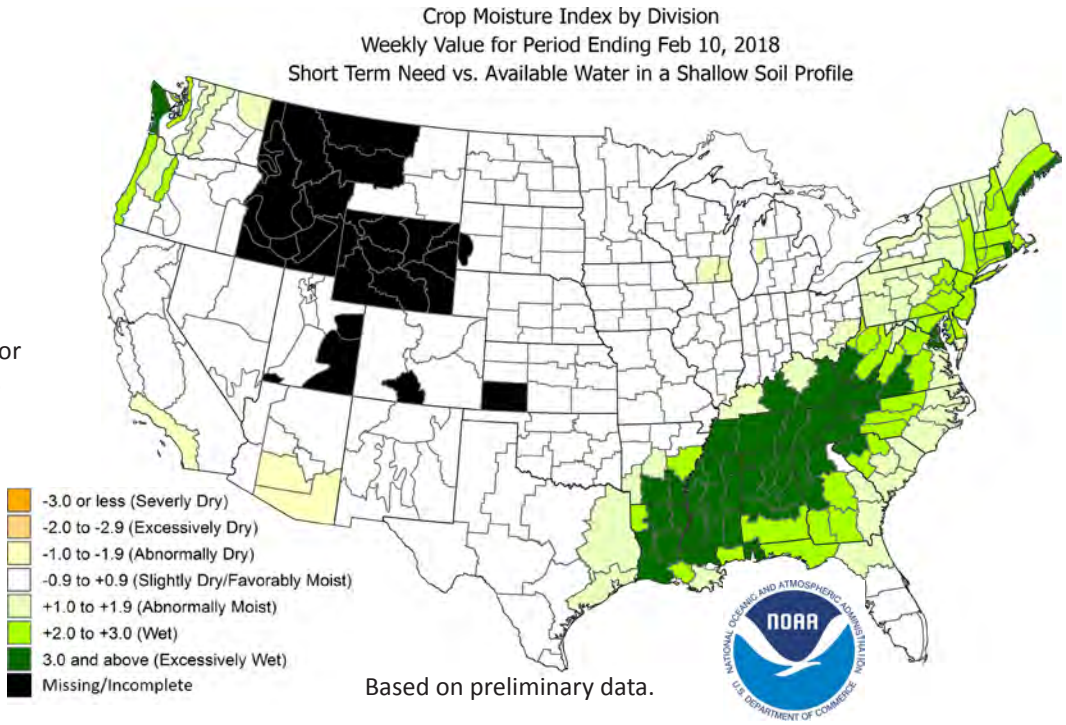
According to the latest *U.S. Drought Monitor*, as of February 13, the estimated Oklahoma population in drought areas is 3,750,436, up by more than 2 million from this time last month. The entire state is now in moderate drought or worse. Almost 89% of the state in area is having severe drought (D2) conditions or worse, and almost 38% is in extreme drought (D3). There are no areas with exceptional drought (D4) conditions.

According to the latest seasonal drought outlook for the period of February 15 through May 31, 2018, most of the Oklahoma will either remain in persistent drought (west) or remaining drought (central and east). There is predicted to be an enormous area of persistent drought across the southwestern quadrant of the contiguous United States.

Crop Moisture Index

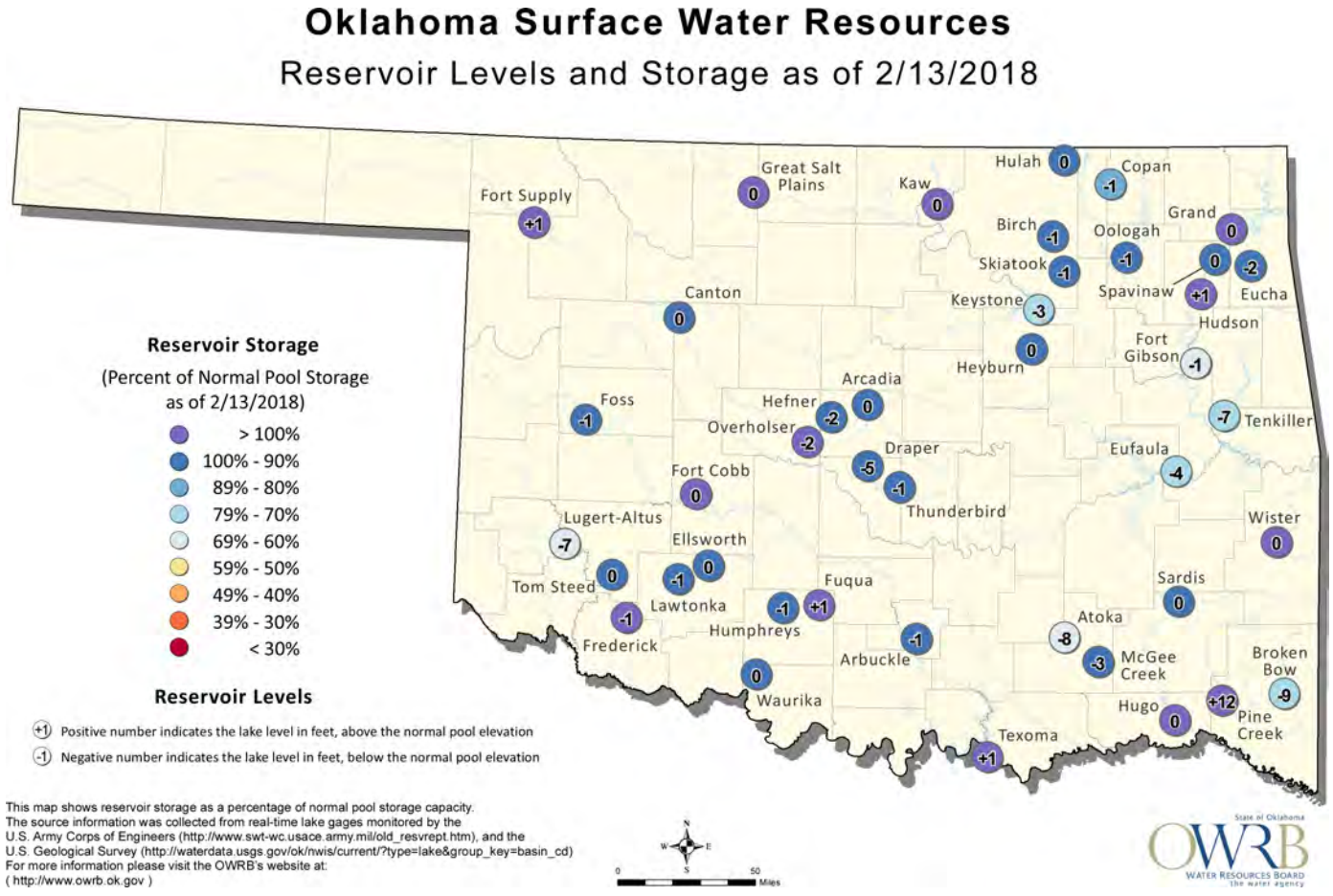
According to the NOAA Crop Moisture Index by Division, for the period ending February 10, 2018, all Oklahoma climate regions are experiencing Slightly Dry/Favorably Moist conditions (-0.9 to +0.9).

Derived from the Palmer Drought Severity Index (PDSI), the Crop Moisture Index reflects moisture supply in the short-term across major crop-producing regions. It identifies potential agricultural droughts. It is not intended to assess long-term droughts.



Based on preliminary data.

Reservoir Storage



The Oklahoma Water Resources Bulletin is compiled and distributed monthly by the Oklahoma Water Resources Board utilizing products and information developed by the Oklahoma Climatological Survey, Oklahoma Mesonet, National Oceanic and Atmospheric Administration, National Drought Mitigation Center, US Geological Survey, US Army Corps of Engineers, and US Department of Agriculture. For questions or comments contact Darla Whitley, Editor.