Oklahoma Water Resources Bulletin
& Summary of Current Conditions

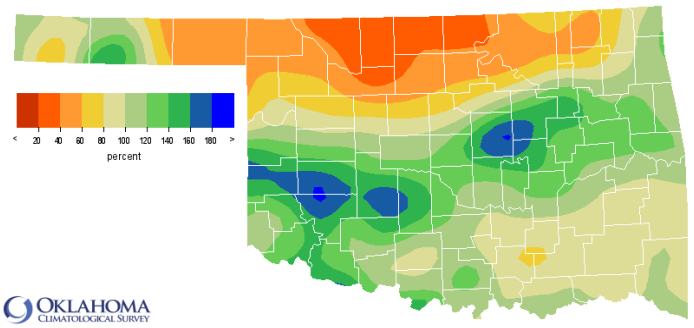
OWRB the water agency

April 15, 2019

Precipitation

Statewide Precipitation

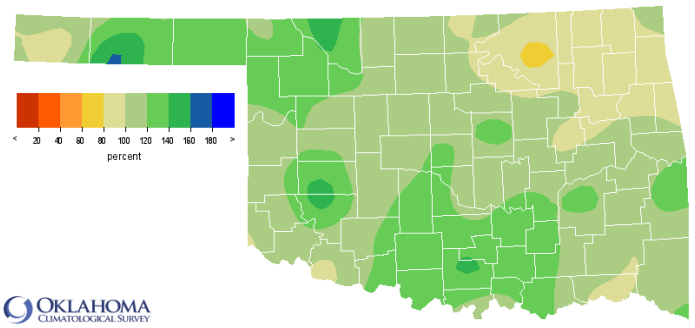
Climate Division	Last 30 Days (March 16, 2019 – April 14, 2019) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days (April 15, 2018 – April 14, 2019) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	1.20"	-0.37"	76%	43rd wettest	25.13"	+4.55"	122%	10th wettest
NORTH CENTRAL	1.11"	-1.54"	42%	26th driest	36.11"	+4.69"	115%	18th wettest
NORTHEAST	2.98"	-0.59"	83%	48th driest	39.62"	-3.05"	93%	46th wettest
WEST CENTRAL	2.86"	+0.62"	128%	28th wettest	35.30"	+6.90"	124%	10th wettest
CENTRAL	3.50"	+0.39"	113%	32nd wettest	43.59"	+5.96"	116%	12th wettest
EAST CENTRAL	4.55"	+0.78"	121%	31st wettest	48.87"	+2.73"	106%	28th wettest
SOUTHWEST	3.21"	+0.95"	142%	24th wettest	34.76"	+4.49"	115%	17th wettest
SOUTH CENTRAL	3.20"	-0.07"	98%	43rd wettest	52.35"	+11.64"	129%	3rd wettest
SOUTHEAST	4.02"	-0.19"	95%	50th wettest	55.94"	+5.35"	111%	20th wettest
STATEWIDE	2.93"	-0.03"	99%	44th wettest	41.26"	+4.79"	113%	14th wettest



OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Mar 16, 2019 through Apr 14, 2019



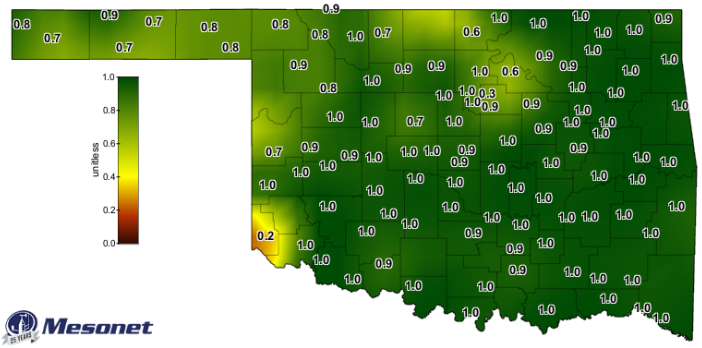
OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Apr 15, 2018 through Apr 14, 2019

Soil Moisture

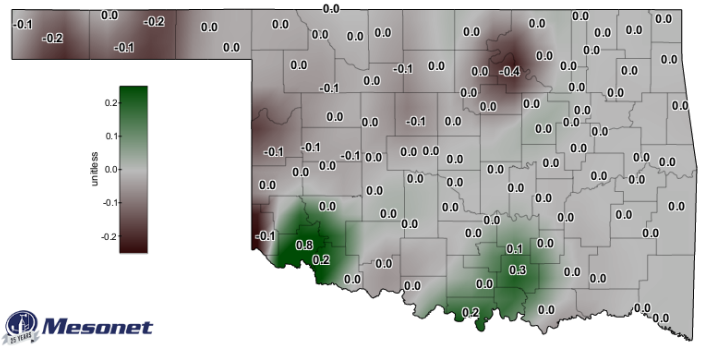
Fractional Water Index
April 14, 2019



Mesonet

1-day Average 10-inch Fractional Water Index

April 14, 2019



Mesonet

7-day 10-inch Fractional Water Index Change

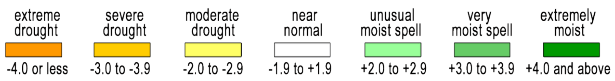
April 14, 2019

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)

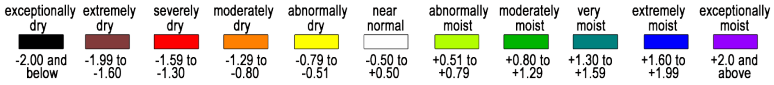
Climate Division	Status 4/6/19	Value 3/16	Value 4/6	Change in Value
NORTHWEST	Very Moist Spell	3.15	2.99	0.16(-)
NORTH CENTRAL	Very Moist Spell	3.75	3.38	0.37(-)
NORTHEAST	Near Normal	2.03	1.72	0.31(-)
WEST CENTRAL	Very Moist Spell	3.4	3.77	0.37(+)
CENTRAL	Very Moist Spell	3.4	3.29	0.11(-)
EAST CENTRAL	Unusual Moist Spell	2.86	2.57	0.29(-)
SOUTHWEST	Very Moist Spell	3.64	3.41	0.23(-)
SOUTH CENTRAL	Very Moist Spell	4.66	3.47	1.19(-)
SOUTHEAST	Very Moist Spell	3.73	3.1	0.63(-)



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 April 6, all climate regions in the state were experiencing near normal conditions or wetter.

Standardized Precipitation Index (SPI)
Through March 2019

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



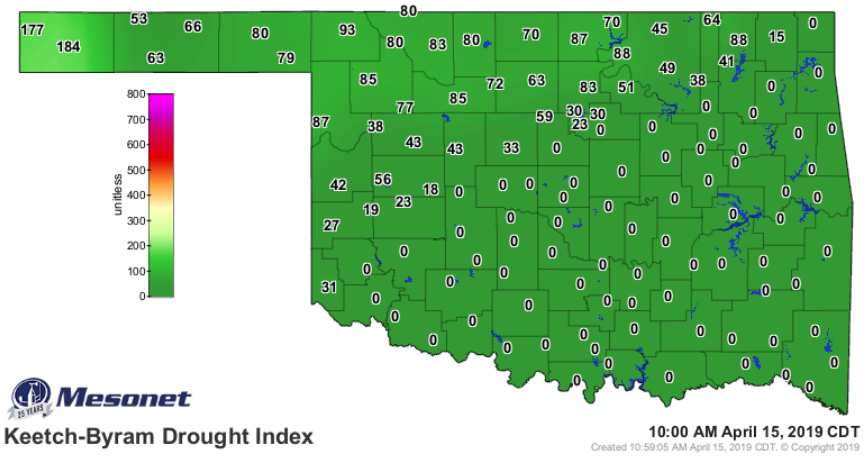
The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. For all three time periods shown, all climate regions were near normal or wetter.

Keetch-Byram Drought Fire Index

April 15, 2019, 10:00 a.m., zero stations are above 600.

Zero stations were above 600 on March 21, 2019.

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.

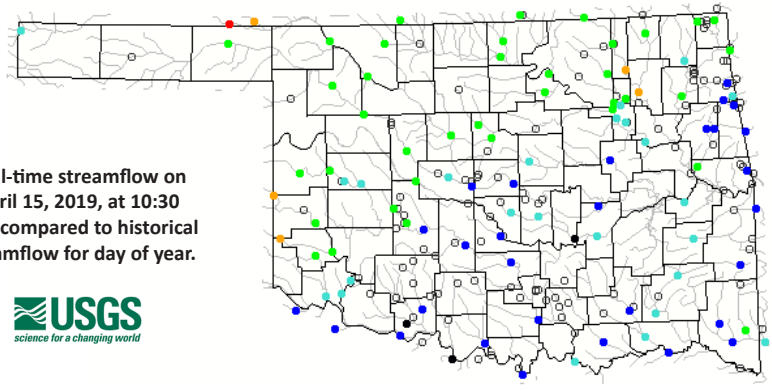


Streamflow Conditions

April 15, 2019

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

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



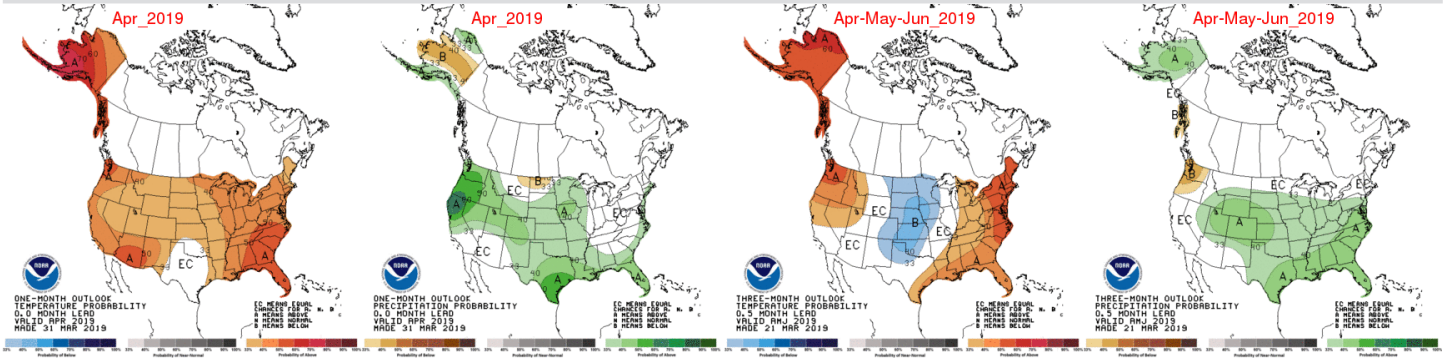
Real-time streamflow on April 15, 2019, at 10:30 a.m. compared to historical streamflow for day of year.

USGS science for a changing world

Weather/Drought Forecast

Seasonal Outlook

Temperature | Precipitation | Temperature | Precipitation

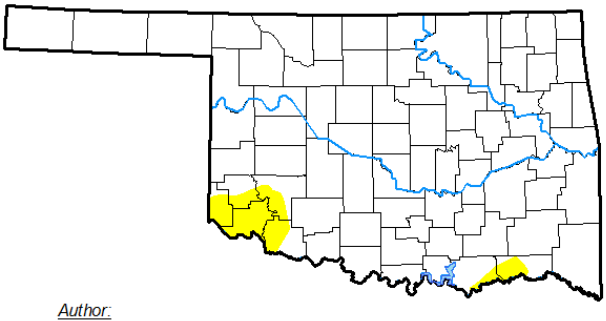


The contours on the maps show the total probability of three categories—above, indicated by the letter "A"; and below, indicated by the letter "B". "EC" indicates "Equal Chances" for A or B.

Drought Summary & Outlook

U.S. Drought Monitor

Oklahoma



April 9, 2019

(Released Thursday, Apr. 11, 2019)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	95.94	4.06	0.00	0.00	0.00	0.00
Last Week 04-02-2019	96.71	3.29	0.00	0.00	0.00	0.00
3 Months Ago 01-08-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2019	94.85	5.15	0.00	0.00	0.00	0.00
Start of Water Year 09-25-2018	72.93	27.07	9.11	4.16	0.00	0.00
One Year Ago 04-10-2018	41.72	58.28	47.44	42.07	34.85	18.35

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.

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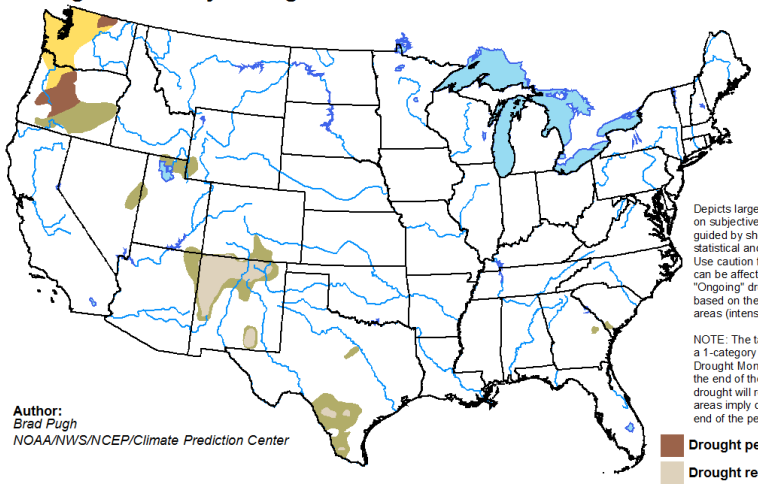
National Drought Mitigation Center

http://droughtmonitor.unl.edu/

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for March 21 - June 30, 2019
Released March 21



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:
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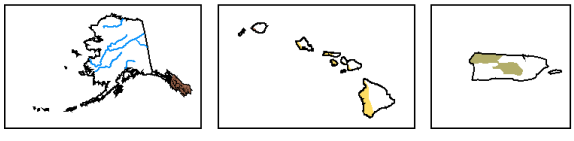
NOAA/NWS/NCEP/Climate Prediction Center



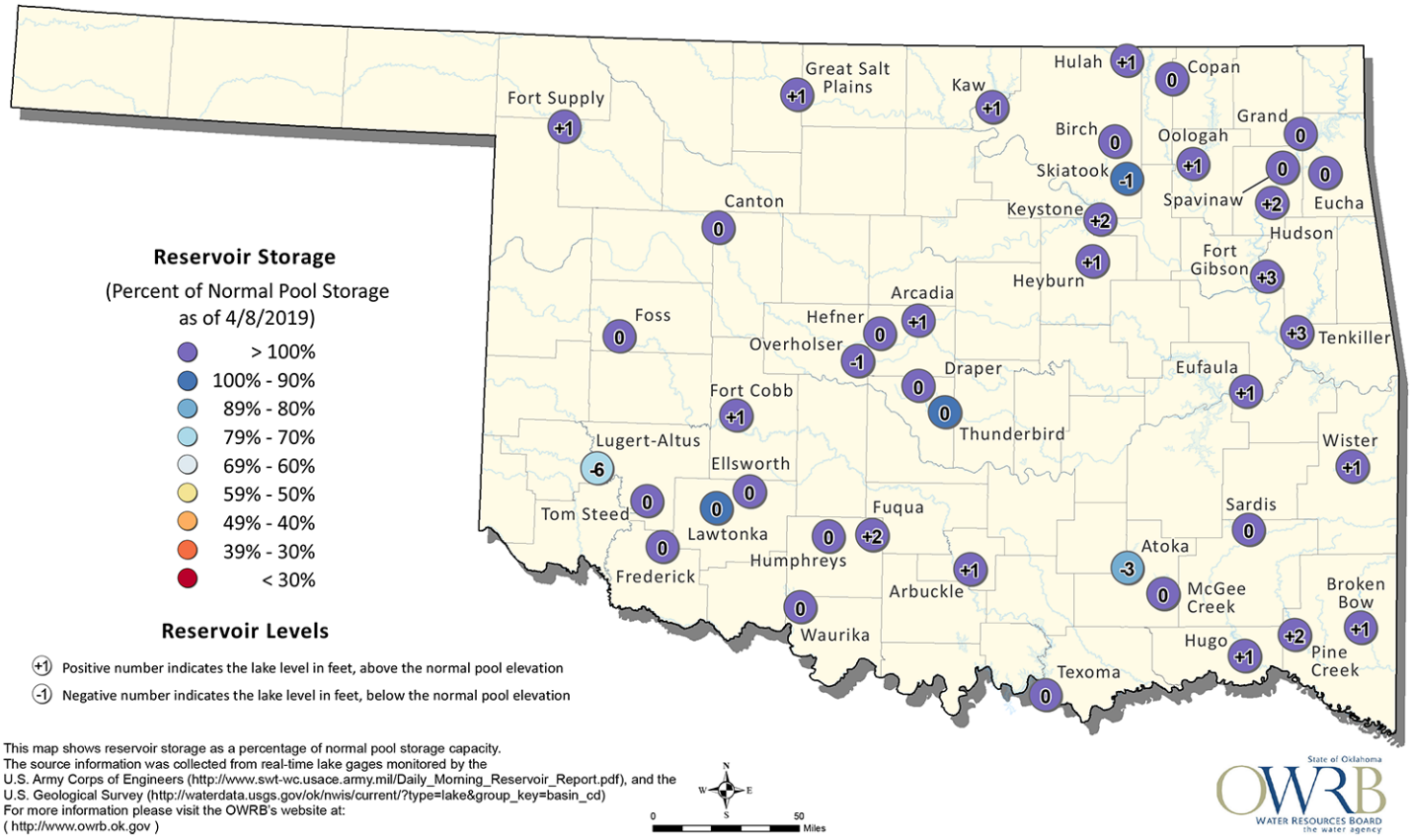
http://go.usa.gov/3eZ73

According to the latest U.S. Drought Monitor, as of April 9, the estimated Oklahoma population in drought areas is still at zero. Only 4.06% of the state (in area) has been classified as abnormally dry.

According to the latest seasonal drought outlook for the period of March 21, 2019, through June 30, 2019, Oklahoma is predicted to be unaffected by drought.

Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 4/8/2019



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 (http://www.swt-wc.usace.army.mil/Daily_Morning_Reservoir_Report.pdf), and the U.S. Geological Survey (http://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd)
For more information please visit the OWRB's website at:
(http://www.owrb.ok.gov)

State of Oklahoma OWRB WATER RESOURCES BOARD the water agency

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