

Oklahoma Water Resources Bulletin & Summary of Current Conditions

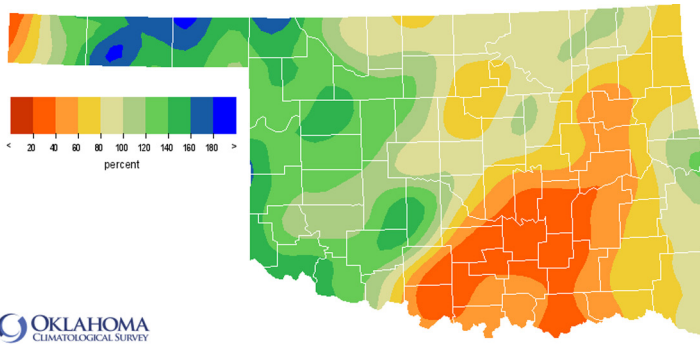


March 31, 2017

PRECIPITATION

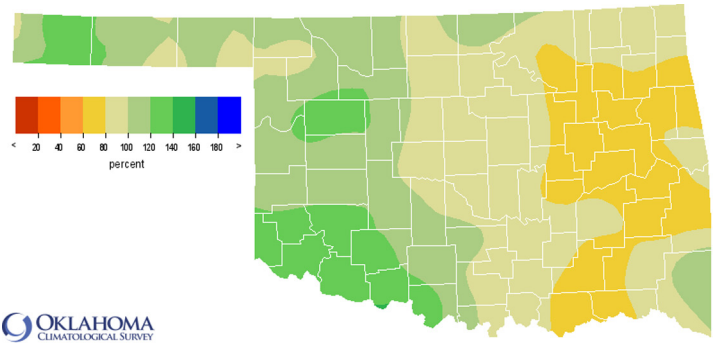
Statewide Precipitation

Climate Division	Last 30 Days March 1, 2017 – March 30, 2017				Last 365 Days March 31, 2016 – March 30, 2017			
	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	1.97"	+0.54"	138%	19th wettest	22.03"	+1.45"	107%	31st wettest
NORTH CENTRAL	2.68"	+0.14"	106%	22nd wettest	32.06"	+0.64"	102%	31st wettest
NORTHEAST	2.75"	-0.69"	80%	48th wettest	36.13"	-6.54"	85%	28th driest
WEST CENTRAL	3.04"	+0.83"	138%	15th wettest	33.13"	+4.73"	117%	14th wettest
CENTRAL	2.78"	-0.26"	91%	35th wettest	34.29"	-3.34"	91%	48th wettest
EAST CENTRAL	2.44"	-1.34"	65%	35th driest	34.86"	-11.28"	76%	18th driest
SOUTHWEST	2.92"	+0.66"	129%	16th wettest	38.70"	+8.43"	128%	10th wettest
SOUTH CENTRAL	1.26"	-2.06"	38%	16th driest	38.17"	-2.54"	94%	42nd wettest
SOUTHEAST	3.24"	-1.08"	75%	37th driest	43.67"	-6.92"	86%	25th driest
STATEWIDE	2.53"	-0.39"	87%	43rd wettest	34.57"	-1.90"	95%	42nd wettest



OKLAHOMA
CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Mar 1, 2017 through Mar 30, 2017
Created 2017-03-31 10:03 AM UTC. Copyright © 2017

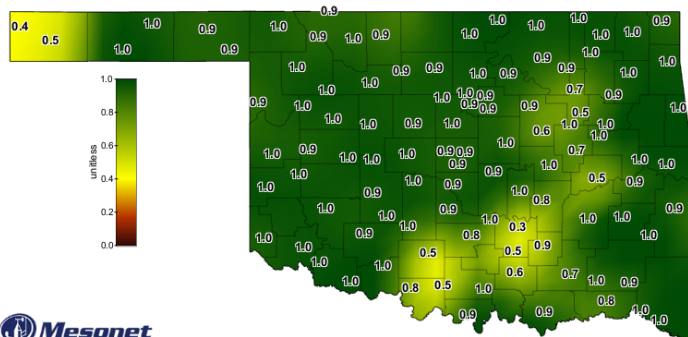


OKLAHOMA
CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Mar 31, 2016 through Mar 30, 2017
Created 2017-03-31 10:03 AM UTC. Copyright © 2017

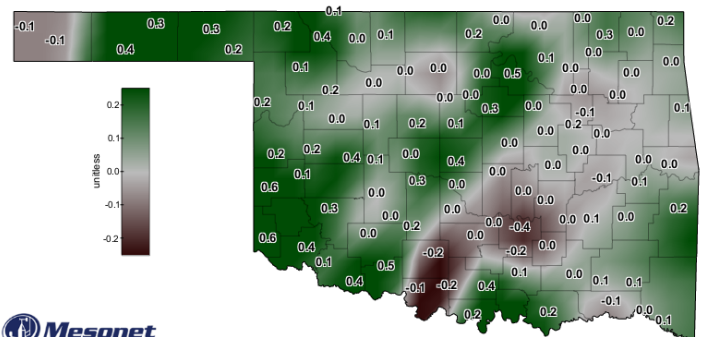
SOIL MOISTURE

Fractional Water Index March 30, 2017



Mesonet
1-day Average 10-inch Fractional Water Index
March 30, 2017

Created 7:30:19 AM March 31, 2017 CDT. © Copyright 2017



Mesonet
7-day 10-inch Fractional Water Index Change
March 30, 2017

Created 6:30:01 AM March 31, 2017 CDT. © Copyright 2017

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)					Standardized Precipitation Index (SPI) Through February 2017		
Climate Division	Status 3/25/17	Value 2/25 3/25	Change in Value		3-month	12-month	24-month
NORTHWEST	Near Normal	-0.54 -1.38	0.84		Moderately Moist	Near Normal	Extremely Moist
NORTH CENTRAL	Near Normal	1.04 -0.66	1.7		Moderately Moist	Near Normal	Moderately Moist
NORTHEAST	Near Normal	-0.68 -1.68	1		Near Normal	Near Normal	Moderately Moist
WEST CENTRAL	Near Normal	0.86 -0.76	1.62		Very Moist	Moderately Moist	Extremely Moist
CENTRAL	Moderate Drought	-0.37 -2.08	1.71		Abnormally Moist	Near Normal	Extremely Moist
EAST CENTRAL	Moderate Drought	-1.66 -2.43	0.77		Near Normal	Abnormally Dry	Extremely Moist
SOUTHWEST	Near Normal	2.32 -0.16	2.48		Moderately Moist	Very Moist	Exceptionally Moist
SOUTH CENTRAL	Moderate Drought	-0.21 -1.91	1.7		Near Normal	Near Normal	Exceptionally Moist
SOUTHEAST	Near Normal	-1.31 -1.71	0.4		Abnormally Dry	Near Normal	Extremely Moist

extreme drought -4.0 or less	severe drought -3.0 to -3.9	moderate drought -2.0 to -2.9	near normal -1.9 to +1.9	unusual moist spell +2.0 to +2.9	very moist spell +3.0 to +3.9	extremely moist +4.0 and above
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exceptionally dry -2.00 and below	extremely dry -1.99 to -1.60	severely dry -1.59 to -1.30	moderately dry -1.29 to -0.80	abnormally dry -0.79 to -0.51	near normal -0.50 to +0.50	abnormally moist +0.51 to +0.79	moderately moist +0.80 to +1.29	very moist +1.30 to +1.59	extremely moist +1.60 to +1.99	exceptionally moist +2.0 and above
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The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland. According to the latest PDSI, all climate regions in the state are classified as Near Normal except the Central, East Central and South Central regions, which are all experiencing Moderate Drought.

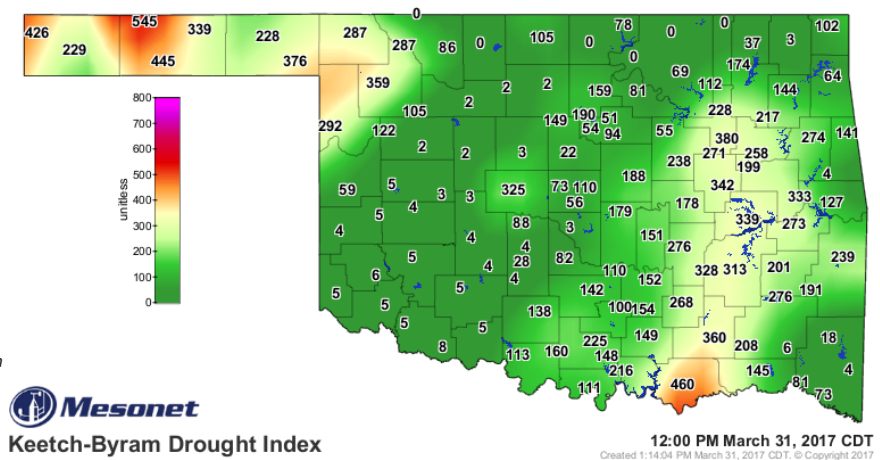
The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. The Southeast climate division had Abnormally Dry conditions for the 3-month period and the East Central division was Abnormally Dry for the 12-month period. All climate divisions had Moderately Moist conditions or wetter for the 24-month period.

Keetch-Byram Drought Fire Index

March 31, 12:00 p.m.--0 stations are above 600.

Zero stations were above 600 on February 28, 2017.

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

March 31, 2017

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

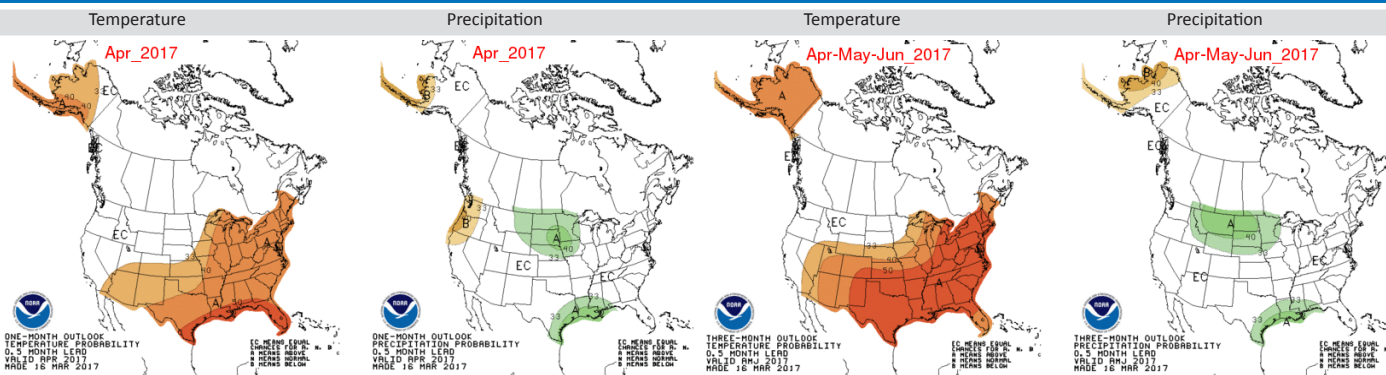
Visit waterwatch.usgs.gov for real-time streamflow information.

Real-time streamflow on March 31, 2017, at 3:30 p.m. compared to historical streamflow for day of year.



WEATHER/DROUGHT FORECAST

Seasonal Outlook

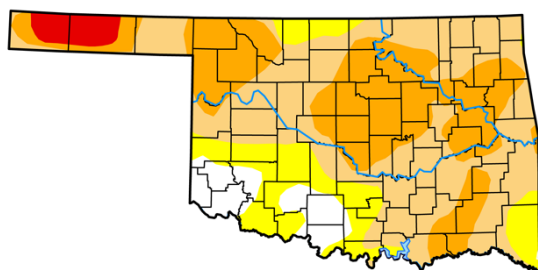


The contours on the maps show the total probability of three categories—above, indicated by the letter “A”; and below, indicated by the letter “B”. “EC” indicates “Equal Chances” for A or B. For April-June, the probability for precipitation in all areas of the state has equal chances of being above or below normal.

Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

March 28, 2017
(Released Thursday, Mar. 30, 2017)
Valid 8 a.m. EDT



Author:
Eric Luebbehusen
U.S. Department of Agriculture



<http://droughtmonitor.unl.edu/>

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.24	92.76	77.80	36.07	2.99	0.00
Last Week 03-21-2017	7.21	92.79	80.56	46.04	3.17	0.00
3 Months Ago 12-27-2016	5.63	94.37	72.32	45.73	3.14	0.00
Start of Calendar Year 01-03-2017	5.61	94.39	83.21	55.75	5.55	0.00
Start of Water Year 09-27-2016	57.82	42.18	19.04	3.05	0.00	0.00
One Year Ago 03-29-2016	41.06	58.94	19.88	0.00	0.00	0.00

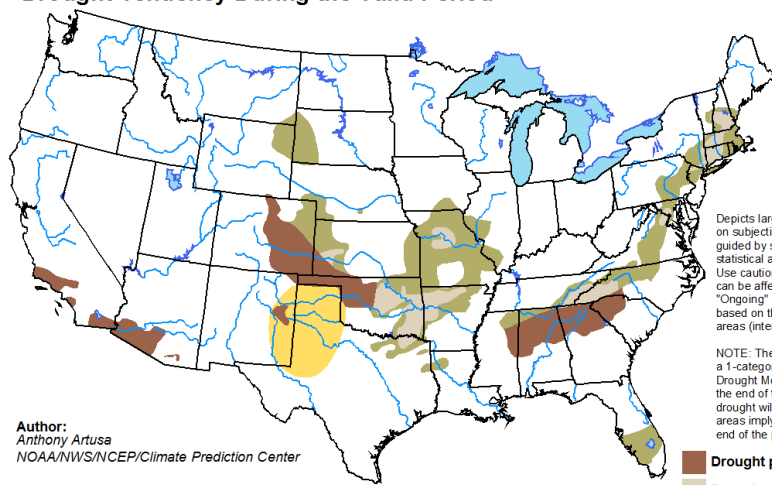
Intensity:

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

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

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

Valid for March 16 - June 30, 2017
Released March 16, 2017



Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center

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



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

According to the latest *U.S. Drought Monitor*, the number of Oklahomans currently affected by drought is 3,314,535, up by about 200,000 from this time last month.

While none of the state is experiencing Exceptional Drought (D4), almost 3% of the state in area is experiencing Extreme Drought (D3). This area includes large portions of Cimarron and Texas counties in the Oklahoma panhandle. More than 92% of the state is shown as having Abnormally Dry conditions (D0) or worse. Areas free of drought conditions are shown in the Southwest region and western third of the South Central region.

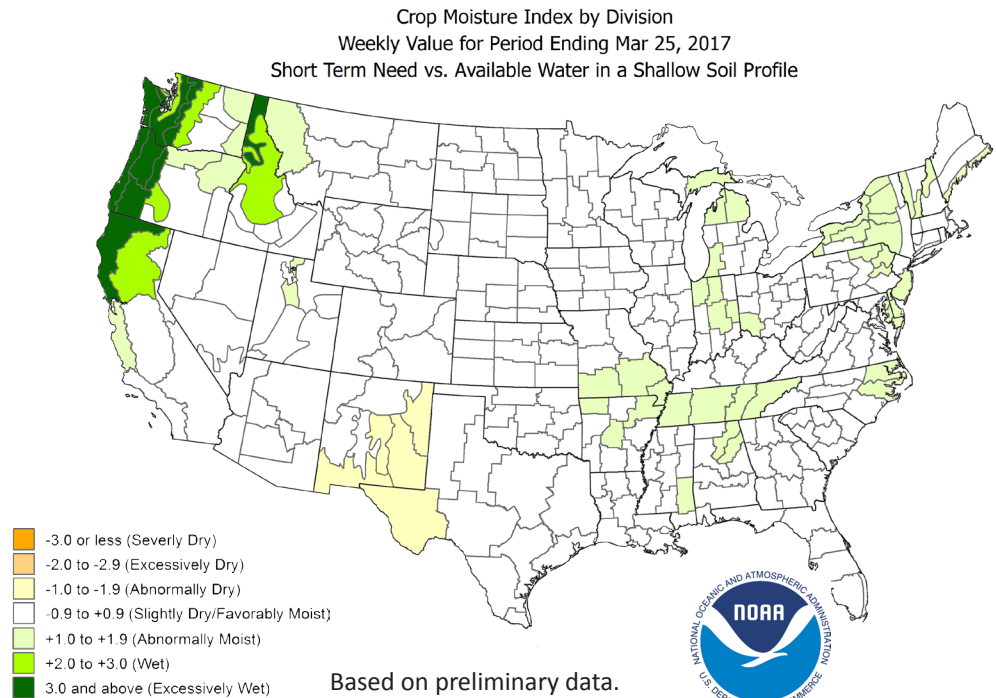
According to the seasonal drought outlook, from mid March through the end of June, drought conditions are likely to persist in the Panhandle, extending westward into the North Central region, but for the rest of the state, conditions are likely to improve.

Drought is likely to persist in a few other areas across the southern half of the U.S. and likely to develop in western Texas and eastern New Mexico.

CROP MOISTURE INDEX

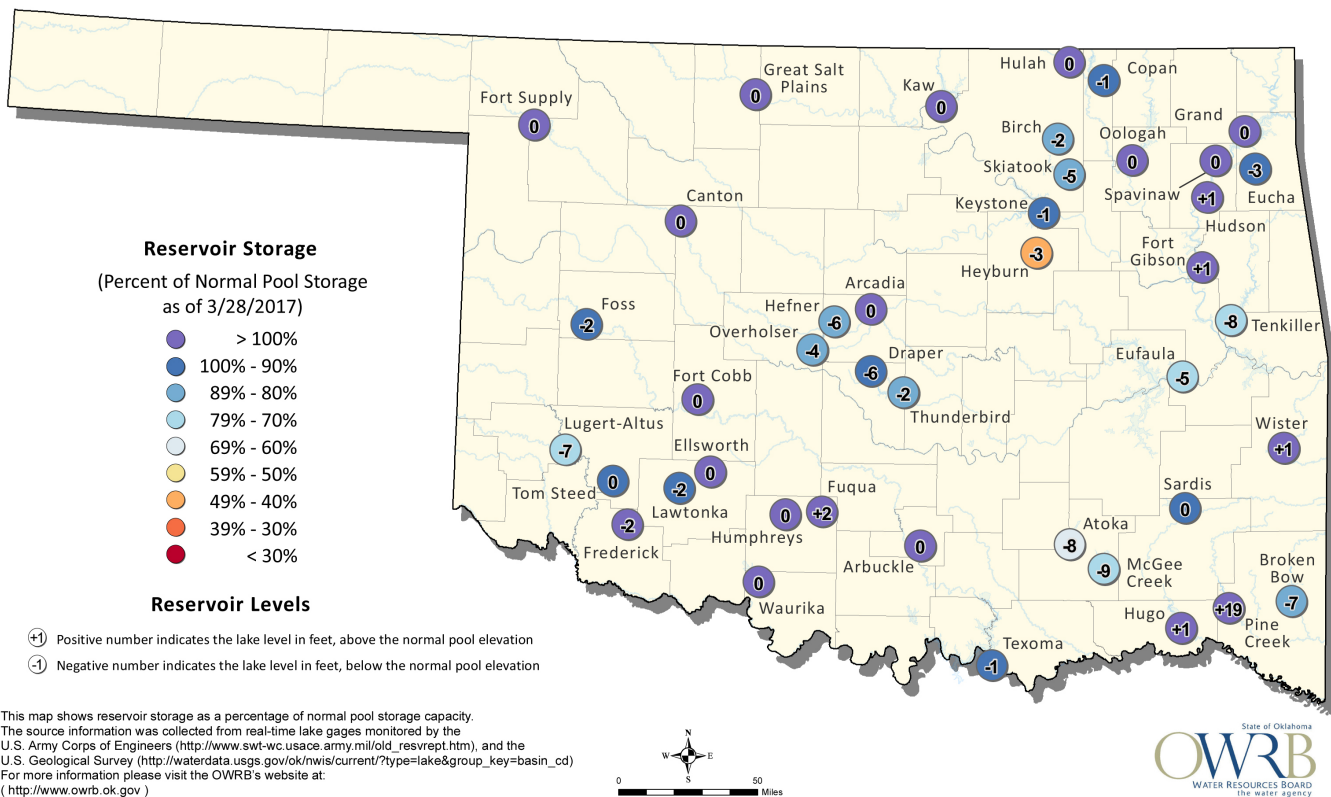
According to the NOAA Crop Moisture Index by Division, for the period ending March 25, 2017, all regions of the state are shown as Slightly Dry/Favorably Moist (-0.9 to +0.9).

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.



RESERVOIR STORAGE

Oklahoma Surface Water Resources Reservoir Levels and Storage as of 3/28/2017



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.