Oklahoma Water Resources Bulletin
& Summary of Current Conditions

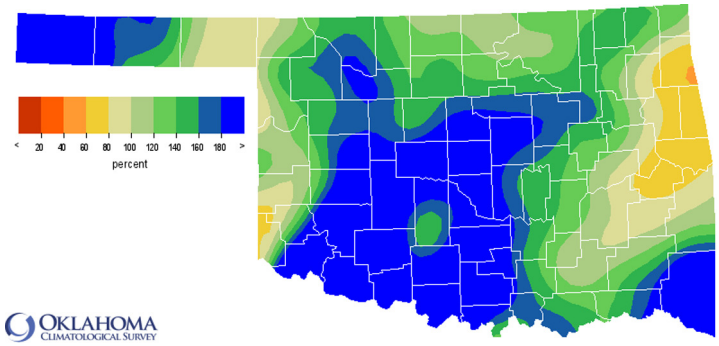
OWRB the water agency

April 28, 2016

Precipitation

Statewide Precipitation

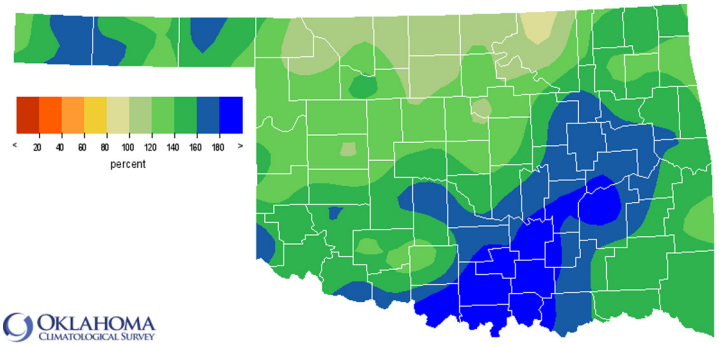
Climate Division	Last 30 Days (March 29, 2016 – April 27, 2016) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days (April 29, 2015 – April 27, 2016) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	2.51"	+0.89"	155%	19th wettest	2.51"	+0.89"	155%	19th wettest
N. CENTRAL	3.95"	+1.16"	141%	19th wettest	3.95"	+1.16"	141%	19th wettest
NORTHEAST	5.04"	+1.14"	129%	24th wettest	5.04"	+1.14"	129%	24th wettest
W. CENTRAL	3.65"	+1.33"	157%	19th wettest	3.65"	+1.33"	157%	19th wettest
CENTRAL	5.78"	+2.51"	177%	12th wettest	5.78"	+2.51"	177%	12th wettest
E. CENTRAL	4.03"	+0.03"	101%	42nd wettest	4.03"	+0.03"	101%	42nd wettest
SOUTHWEST	6.49"	+3.95"	256%	3rd wettest	6.49"	+3.95"	256%	3rd wettest
S. CENTRAL	6.87"	+3.28"	191%	10th wettest	6.87"	+3.28"	191%	10th wettest
SOUTHEAST	6.71"	+2.36"	154%	23rd wettest	6.71"	+2.36"	154%	23rd wettest
STATEWIDE	5.03"	+1.87"	159%	13th wettest	5.03"	+1.87"	159%	13th wettest



OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Mar 29, 2016 through Apr 27, 2016



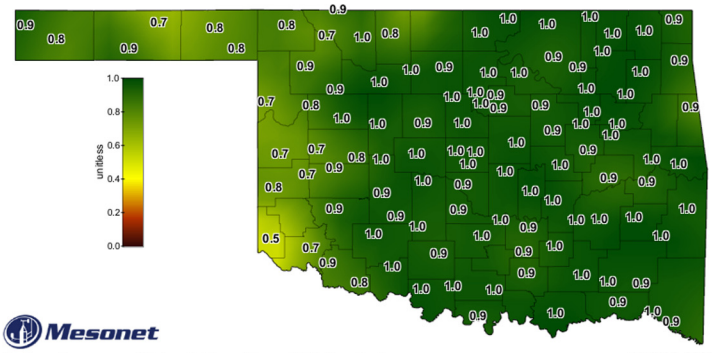
OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Apr 29, 2015 through Apr 27, 2016

Soil Moisture

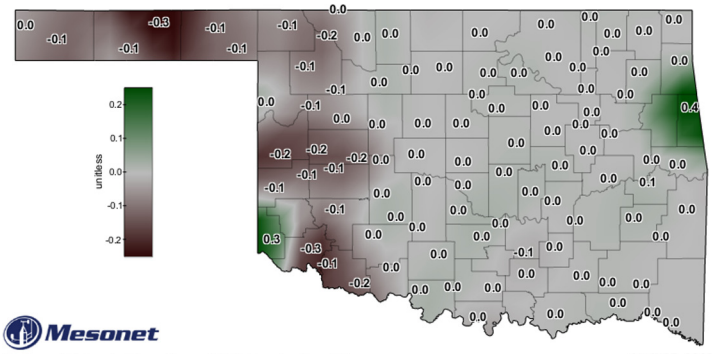
Fractional Water Index
April 27, 2016



Mesonet

1-day Average 10-inch Fractional Water Index

April 27, 2016



Mesonet

7-day 10-inch Fractional Water Index Change

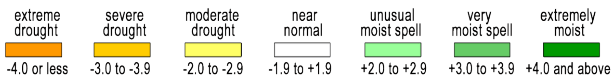
April 27, 2016

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)

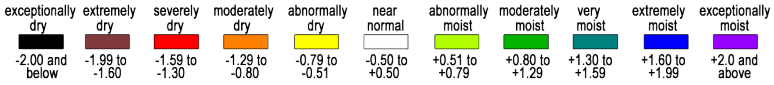
Climate Division	Status 4/23/16	Value 3/26	Value 4/23	Change in Value
NORTHWEST	Unusual Moist Spell	1.24	2.11	-0.87
NORTH CENTRAL	Unusual Moist Spell	1.25	2.27	-1.02
NORTHEAST	Unusual Moist Spell	1.74	2.09	-0.35
WEST CENTRAL	Unusual Moist Spell	1.57	2.59	-1.02
CENTRAL	Very Moist Spell	2.76	3.68	-0.92
EAST CENTRAL	Extremely Moist	4.76	3.94	0.82
SOUTHWEST	Extremely Moist	2.42	4.14	-1.72
SOUTH CENTRAL	Extremely Moist	4.77	5.46	-0.69
SOUTHEAST	Extremely Moist	4.39	4.47	-0.08



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 near normal or wetter and all regions except the East Central experienced moisture increases in the past month. The East Central region and all regions in the south are classified as Extremely Moist.

Standardized Precipitation Index (SPI)
Through March 2016

3-month	12-month	24-month
Moderately Dry	Exceptionally Moist	Very Moist
Moderately Dry	Very Moist	Abnormally Moist
Moderately Dry	Extremely Moist	Abnormally Moist
Abnormally Dry	Exceptionally Moist	Very Moist
Abnormally Dry	Exceptionally Moist	Very Moist
Abnormally Dry	Exceptionally Moist	Exceptionally Moist
Abnormally Dry	Exceptionally Moist	Moderately Moist
Near Normal	Exceptionally Moist	Exceptionally Moist
Near Normal	Exceptionally Moist	Exceptionally 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. All climate divisions had above normal precipitation for the 12- and 24-month time periods. For the 3-month time period, the Northwest, North Central, and Northeast regions were Moderately Dry, and the West Central, Central, East Central, and Southwest were Abnormally Dry.

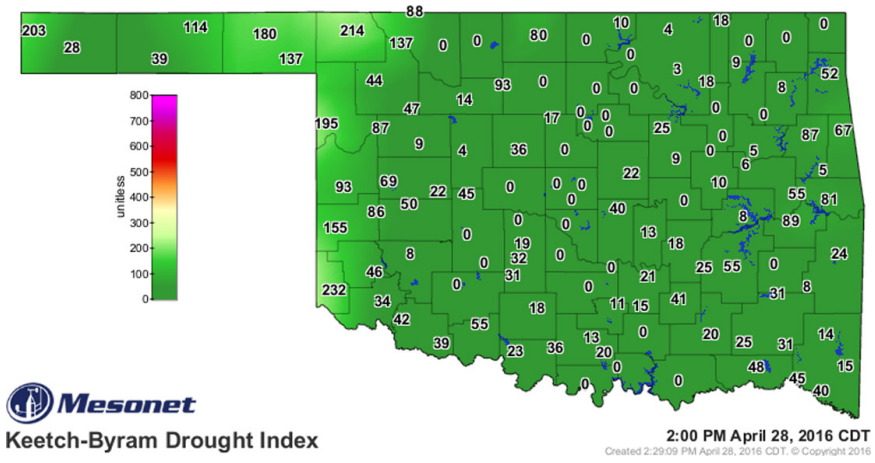
Keetch-Byram Drought Fire Index

MESONET STATION	CLIMATE DIVISION	CURRENT VALUE

No stations are currently near 600 (April 28).

Stations above 600 on March 28 = 0

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.

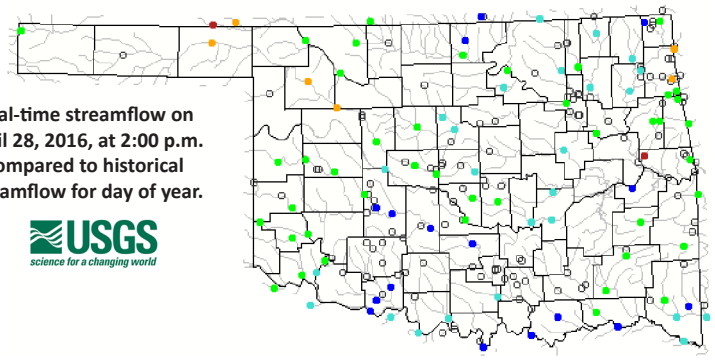


Streamflow Conditions

April 28, 2016

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 28, 2016, at 2:00 p.m. compared to historical streamflow for day of year.

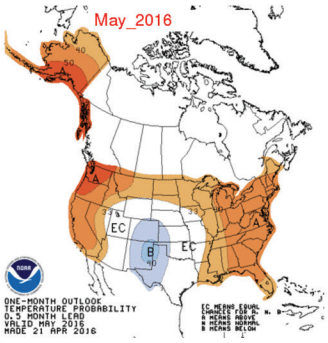
USGS science for a changing world

Weather/Drought Forecast

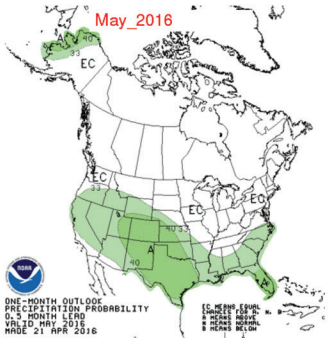
Seasonal Outlook

May 2016

Temperature

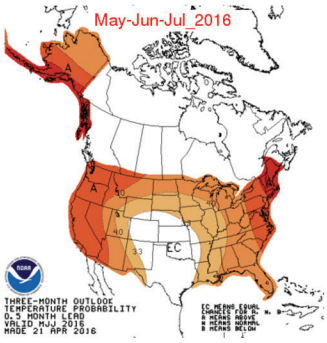


Precipitation

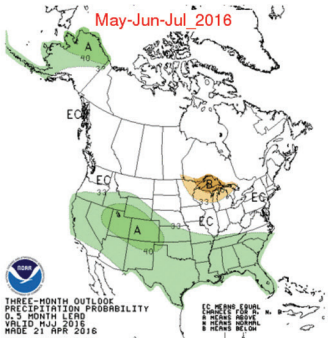


May-June-July

Temperature



Precipitation

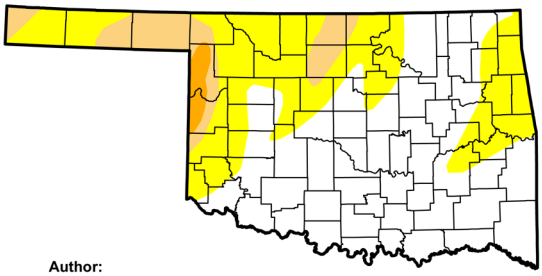


The contours on the maps show the total probability of three categories—above, indicated by the letter "A"; below, indicated by the letter "B"; and the middle category, indicated by the letter "N". "EC" stands for "Equal Chances" for A, N, or B

Regional Drought Summary & Outlook

U.S. Drought Monitor

Oklahoma



Author:
Richard Heim
NCEI/NOAA

http://droughtmonitor.unl.edu/

April 26, 2016
(Released Thursday, Apr. 28, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	56.23	43.77	10.30	1.65	0.00	0.00
Last Week 4/19/2016	56.23	43.77	10.25	1.65	0.00	0.00
3 Months Ago 1/26/2016	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 12/29/2015	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 9/29/2015	52.60	47.40	16.79	6.37	0.97	0.00
One Year Ago 4/28/2015	30.08	69.92	59.29	47.51	24.34	4.13

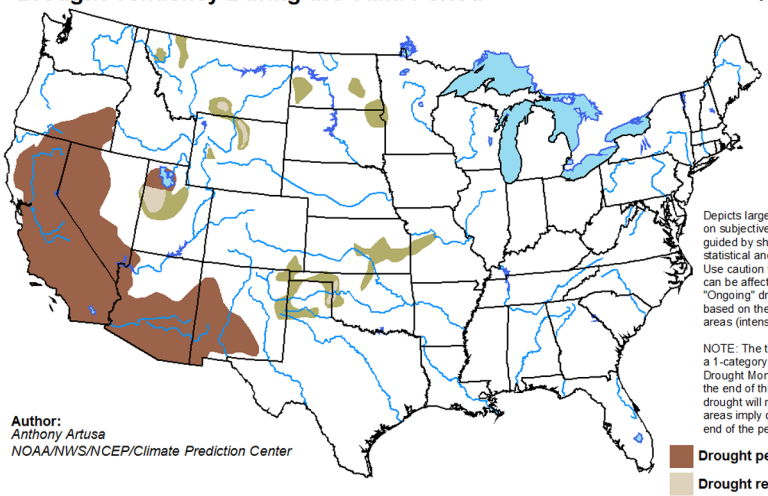
Intensity:

- 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.

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

Valid for April 21 - July 31, 2016
Released April 21, 2016



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

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

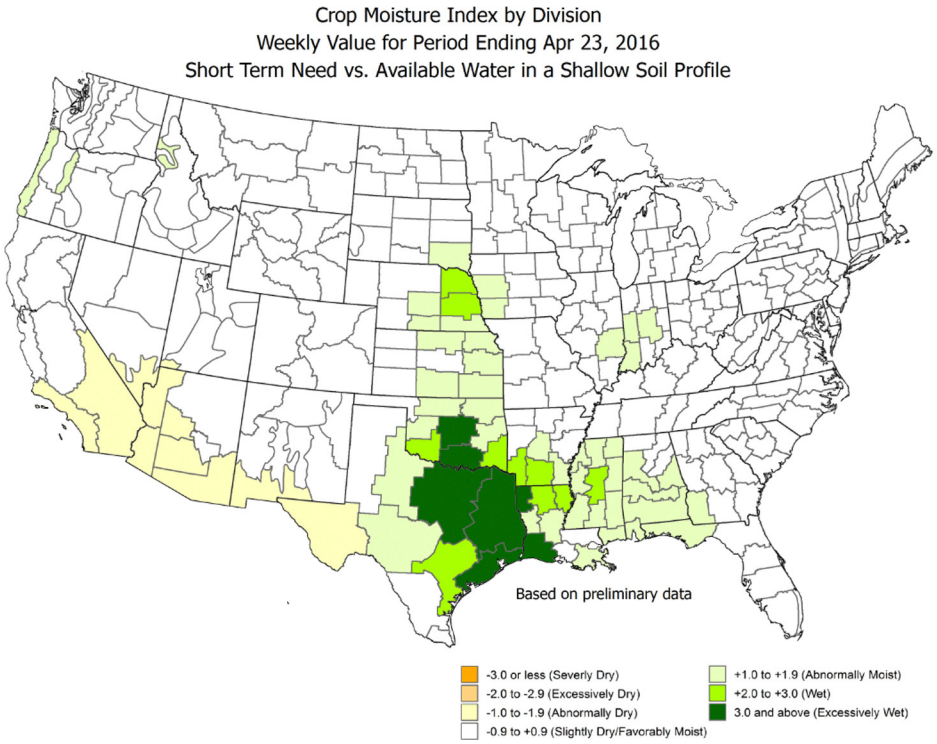
According to the U.S. Drought Monitor, the approximate number of Oklahomans currently affected by drought (category D1-D4) is 80,549, up from 55,372 at this time last month. About 1.7% of the state (in area) is now classified as experiencing Severe Drought, while 10.3% of the state is in Moderate Drought or worse. A year ago more than 59% of the state was suffering from drought, and more than 4% of the state was in Exceptional Drought, the worst category.

According to the seasonal drought outlook, from mid April through the end of July drought conditions are not likely to develop in any parts of Oklahoma. However, during this time period, drought is likely to persist in most of California through western Nevada, southeastern Oregon, southern Arizona, and southwestern New Mexico.

Crop Moisture Index

According to the NOAA Crop Moisture Index by Division, for the period ending April 23, the Northwest region was classified as near normal, the North Central, Northeast, West Central, and East Central were Abnormally Moist, the Southwest and Southeast were Wet, and the Central and South Central were Excessively Wet (the wettest category).

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