

Oklahoma Water Resources Bulletin & Summary of Current Conditions

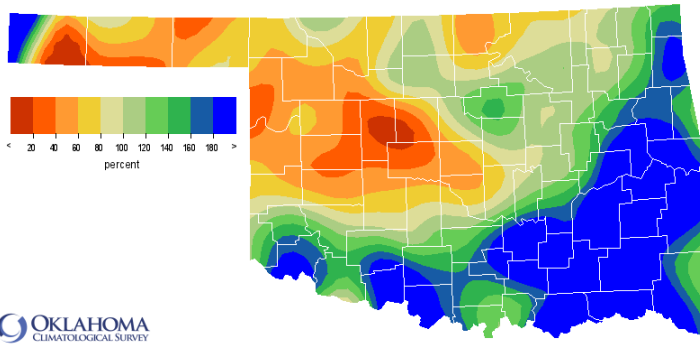


July 17, 2017

PRECIPITATION

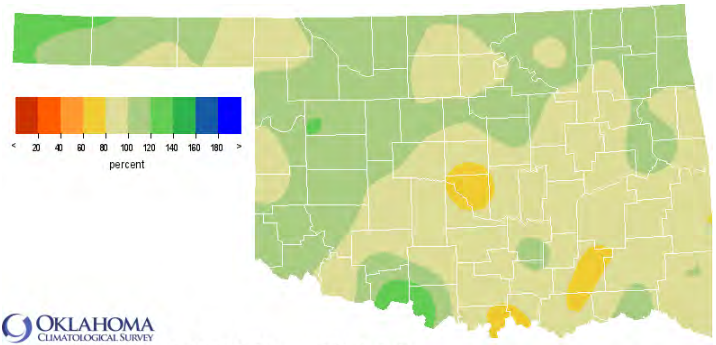
Statewide Precipitation

Climate Division	Last 30 Days June 17, 2017 – July 16, 2017				Last 365 Days July 17, 2016 – July 16, 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	2.14"	-0.57"	79%	42nd driest	21.90"	+1.32"	106%	31st wettest
NORTH CENTRAL	2.76"	-0.85"	77%	43rd driest	32.66"	+1.24"	104%	32nd wettest
NORTHEAST	4.43"	+0.37"	109%	39th wettest	43.95"	+1.28"	103%	29th wettest
WEST CENTRAL	1.36"	-1.40"	49%	23rd driest	31.24"	+2.84"	110%	17th wettest
CENTRAL	3.24"	-0.46"	88%	45th wettest	34.81"	-2.82"	93%	44th wettest
EAST CENTRAL	6.84"	+3.16"	186%	11th wettest	43.58"	-2.56"	94%	45th wettest
SOUTHWEST	3.82"	+0.75"	124%	18th wettest	31.75"	+1.48"	105%	26th wettest
SOUTH CENTRAL	6.42"	+2.90"	182%	6th wettest	37.30"	-3.41"	92%	46th driest
SOUTHEAST	9.36"	+5.38"	235%	2nd wettest	47.27"	-3.32"	93%	40th driest
STATEWIDE	4.41"	+0.93"	127%	19th wettest	35.92"	-0.55"	98%	40th wettest



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

Jun 17, 2017 through Jul 16, 2017
Created 7/30/17 10:01 AM EDT. Copyright © 2017

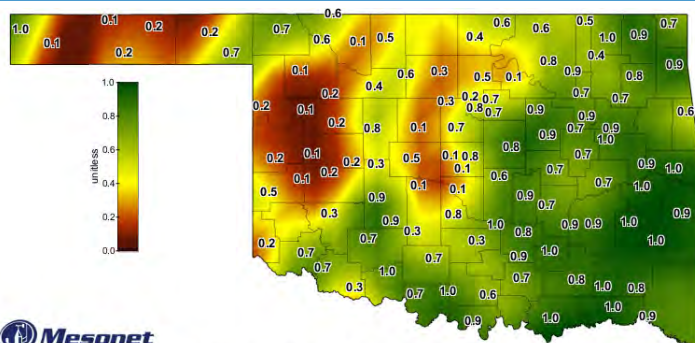


OKLAHOMA
CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Jul 17, 2016 through Jul 16, 2017
Created 7/30/17 10:01 AM EDT. Copyright © 2017

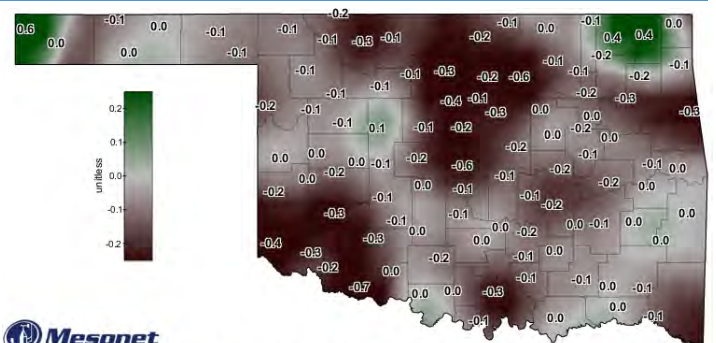
SOIL MOISTURE

Fractional Water Index July 16, 2017



Mesonet
1-day Average 10-inch Fractional Water Index
July 16, 2017

Created 7/30/17 10:01 AM EDT. Copyright © 2017



Mesonet
7-day 10-inch Fractional Water Index Change
July 16, 2017

Created 7/30/17 10:01 AM EDT. 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 June 2017		
Climate Division	Status 7/15/17	Value 6/10 7/15	Change in Value		3-month	12-month	24-month
NORTHWEST	Near Normal	1.63 -0.42	2.05 (-)		Moderately Moist	Abnormally Moist	Very Moist
NORTH CENTRAL	Near Normal	1.35 -0.3	1.65 (-)		Near Normal	Moderately Moist	Moderately Moist
NORTHEAST	Near Normal	1.56 0.38	1.18 (-)		Very Moist	Moderately Moist	Moderately Moist
WEST CENTRAL	Near Normal	1.28 -1.3	2.58 (-)		Near Normal	Abnormally Moist	Moderately Moist
CENTRAL	Near Normal	0.29 -1.49	1.78 (-)		Near Normal	Near Normal	Abnormally Moist
EAST CENTRAL	Near Normal	0.97 1.25	0.28 (+)		Moderately Moist	Near Normal	Moderately Moist
SOUTHWEST	Near Normal	1.84 0.91	0.93 (-)		Near Normal	Near Normal	Moderately Moist
SOUTH CENTRAL	Near Normal	-0.17 0.43	0.6 (+)		Abnormally Dry	Moderately Dry	Moderately Moist
SOUTHEAST	Near Normal	-1.14 0.51	1.65 (+)		Near Normal	Moderately Dry	Abnormally 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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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.

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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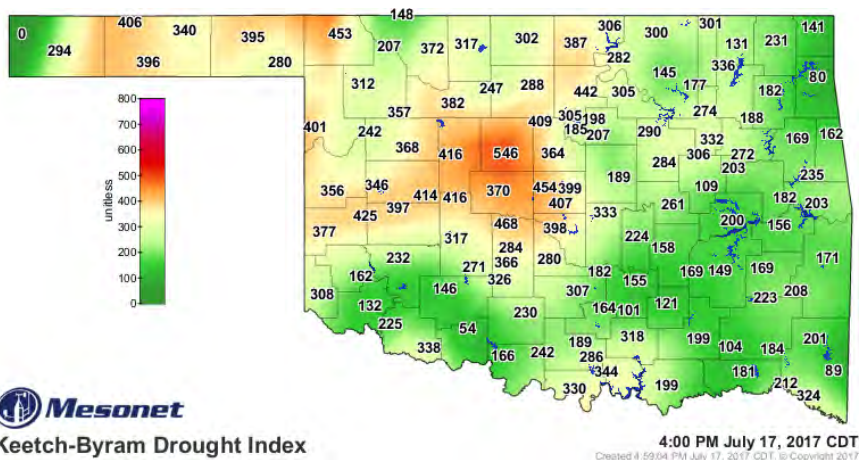
The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. For the 3-month time period, the South Central region had abnormally dry conditions, and for the 12-month period, the South Central and Southeast regions had moderately dry conditions.

Keetch-Byram Drought Fire Index

July 17, 4:00 p.m.--0 stations are above 600.

Zero stations were above 600 on June 16, 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.



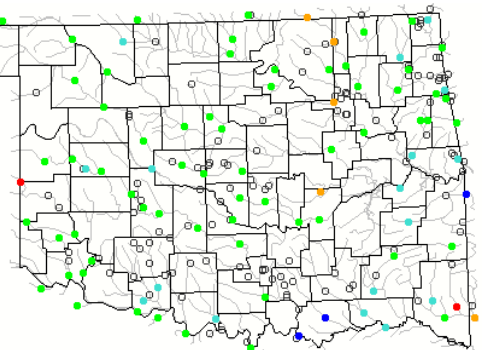
STREAMFLOW CONDITIONS

July 17, 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

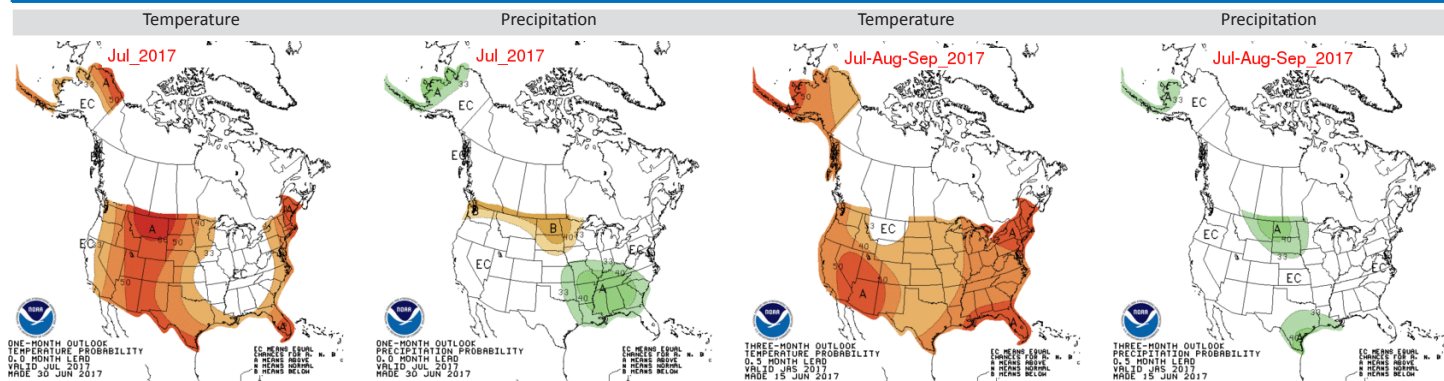
Visit waterwatch.usgs.gov for real-time streamflow information.

Real-time streamflow on July 17, 2017, at 4:30 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.

Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

July 11, 2017

(Released Thursday, Jul. 13, 2017)

Valid 8 a.m. EDT

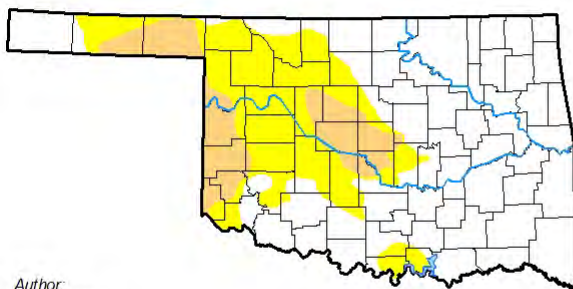
Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	63.70	36.30	12.04	0.00	0.00	0.00
Last Week 07-04-2017	56.58	43.42	10.57	0.01	0.00	0.00
3 Months Ago 04-11-2017	23.65	76.35	50.92	13.65	0.00	0.00
Start of Calendar Year 01-01-2017	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 07-12-2016	64.49	35.51	7.36	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.



Author:

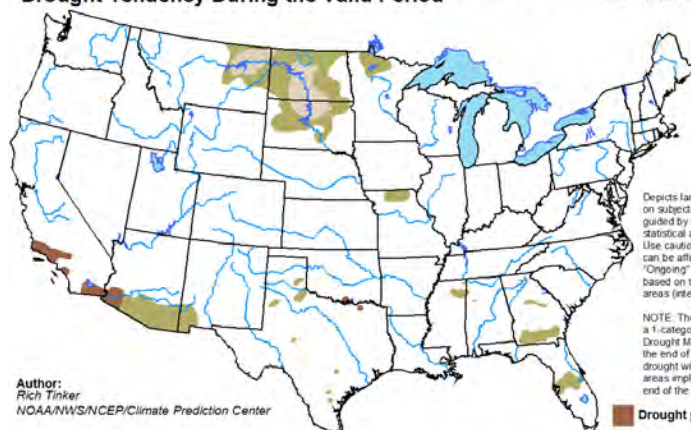
David Simeral
Western Regional Climate Center



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

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

Valid for June 15 - September 30, 2017
Released June 15, 2017



Author:
Rich Tinker
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 938,413 up by more than 900,000 from this time last month.

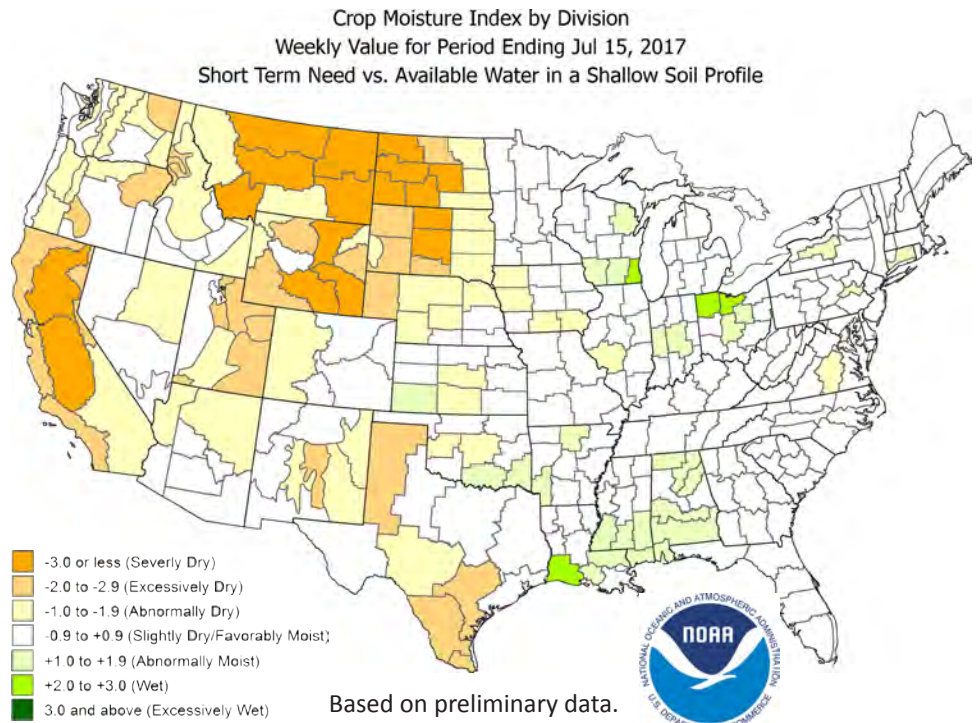
No areas of the state are suffering from exceptional, extreme, or severe drought (D4-D2). However, about 12% of the state (in area) is in moderate drought (D1). This includes portions of central, west central, and northwest Oklahoma. More than 36% of the state is abnormally dry.

According to the latest seasonal drought outlook for the period of June 15 through September 30, drought will persist in a very small area in south central Oklahoma. Most of the contiguous United States is expected to be either free of drought or improving for this time period. There are a few areas in southern California and Arizona where drought is expected to persist.

CROP MOISTURE INDEX

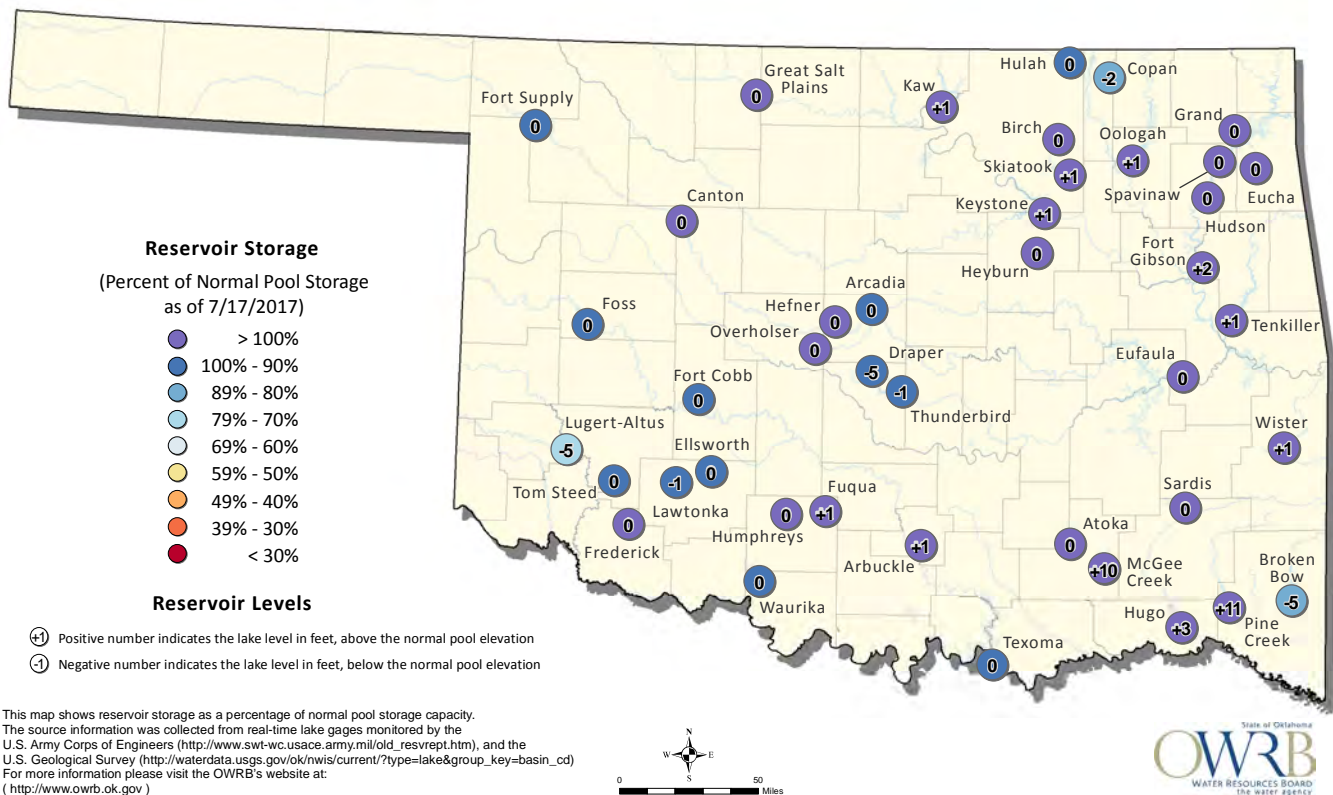
According to the NOAA Crop Moisture Index by Division, for the period ending July 15, 2017, the West Central and Central climate regions of Oklahoma are experiencing abnormally dry conditions, while the South Central and Southeast regions are abnormally moist. All other regions of the state are Slightly Dry/Favorably Moist.

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 7/17/2017



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.