

Oklahoma Water Resources Bulletin & Summary of Current Conditions

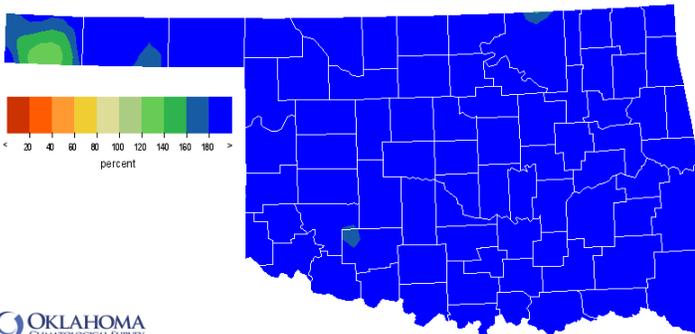


December 27, 2015

PRECIPITATION

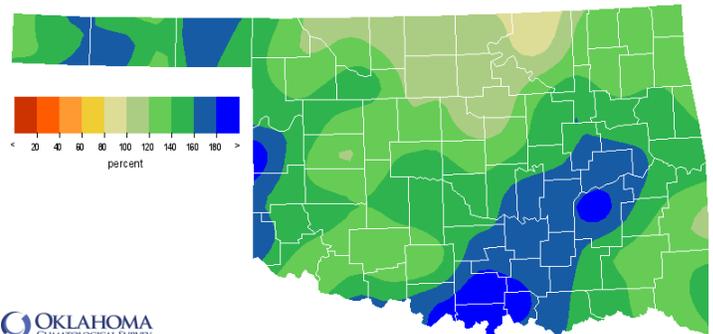
Statewide Precipitation

Climate Division	Last 30 Days November 27, 2015 – December 26, 2015				Last 365 Days December 27, 2014 – December 26, 2015			
	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	1.82"	+1.07"	243%	4th wettest	31.04"	+10.46"	151%	2nd wettest
N. CENTRAL	3.67"	+2.39"	287%	2nd wettest	37.37"	+5.95"	119%	11th wettest
NORTHEAST	8.04"	+5.62"	332%	1st wettest	54.47"	+11.80"	128%	7th wettest
W. CENTRAL	3.13"	+1.91"	257%	6th wettest	41.20"	+12.80"	145%	3rd wettest
CENTRAL	5.33"	+3.36"	270%	2nd wettest	52.12"	+14.49"	139%	2nd wettest
E. CENTRAL	10.54"	+7.40"	336%	1st wettest	74.34"	+28.20"	161%	1st wettest
SOUTHWEST	3.54"	+2.09"	244%	4th wettest	43.17"	+12.90"	143%	2nd wettest
S. CENTRAL	7.54"	+4.99"	296%	1st wettest	69.44"	+28.73"	171%	1st wettest
SOUTHEAST	11.34"	+7.26"	278%	2nd wettest	70.31"	+19.72"	139%	3rd wettest
STATEWIDE	6.05"	+3.97"	291%	1st wettest	52.47"	+16.00"	144%	1st wettest



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

Nov 27, 2015 through Dec 26, 2015
Created 2015-12-27 10:01:32 UTC. Copyright © 2015

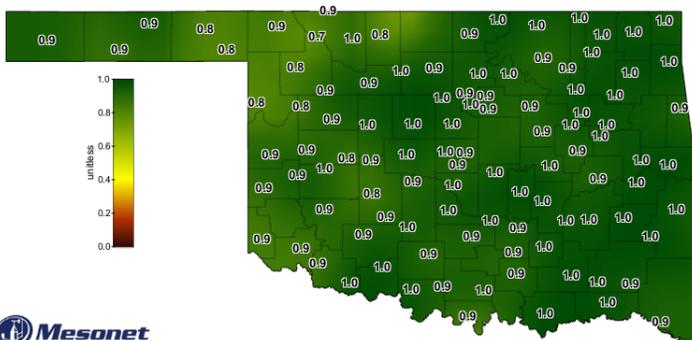


OKLAHOMA CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Dec 27, 2014 through Dec 26, 2015
Created 2015-12-27 10:03:06 UTC. Copyright © 2015

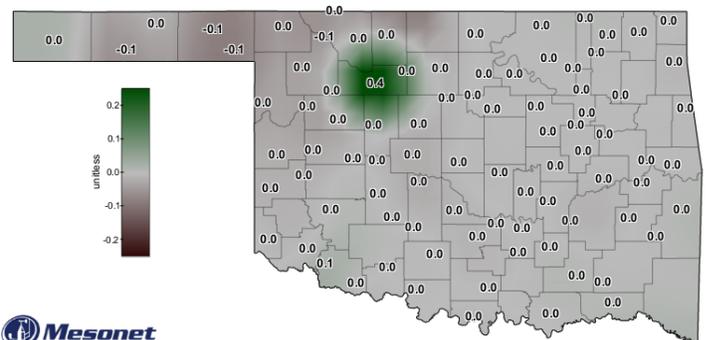
SOIL MOISTURE

Fractional Water Index December 26, 2015



Mesonet
Daily Averaged Fractional Water Index at 10 inches

December 26, 2015
Created 6:30:13 AM December 27, 2015 CST. © Copyright 2015



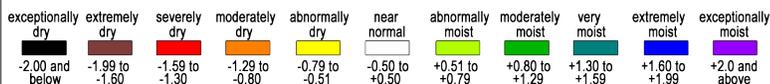
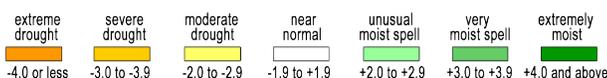
Mesonet
7-Day Change in Fractional Water Index at 10 inches

December 30, 2015
Created 5:30:01 AM December 27, 2015 EST. © Copyright 2015

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 November 2015		
Climate Division	Status 12/19/15	Value 11/21 12/19	Change in Value	3-month	12-month	24-month
NORTHWEST	Extremely Moist	4.22 4.75	-0.53	Moderately Moist	Exceptionally Moist	Moderately Moist
NORTH CENTRAL	Unusual Moist Spell	0.54 2.55	-2.01	Near Normal	Moderately Moist	Near Normal
NORTHEAST	Very Moist Spell	1.58 3.02	-1.44	Near Normal	Moderately Moist	Near Normal
WEST CENTRAL	Very Moist Spell	1.65 3.12	-1.47	Near Normal	Exceptionally Moist	Moderately Moist
CENTRAL	Very Moist Spell	2.05 3.35	-1.3	Abnormally Moist	Exceptionally Moist	Moderately Moist
EAST CENTRAL	Extremely Moist	4.03 5.11	-1.08	Abnormally Moist	Exceptionally Moist	Very Moist
SOUTHWEST	Very Moist Spell	1.94 3.21	-1.27	Abnormally Moist	Exceptionally Moist	Moderately Moist
SOUTH CENTRAL	Extremely Moist	3.05 5.01	-1.96	Very Moist	Exceptionally Moist	Extremely Moist
SOUTHEAST	Extremely Moist	1.53 4.2	-2.67	Very Moist	Exceptionally Moist	Very Moist



The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland. According to the latest PDSI, no climate divisions in Oklahoma have undergone a moisture decrease in the last month. The Northwest, East Central, South Central, and Southeast divisions are currently experiencing extremely moist conditions (+4.0 and above).

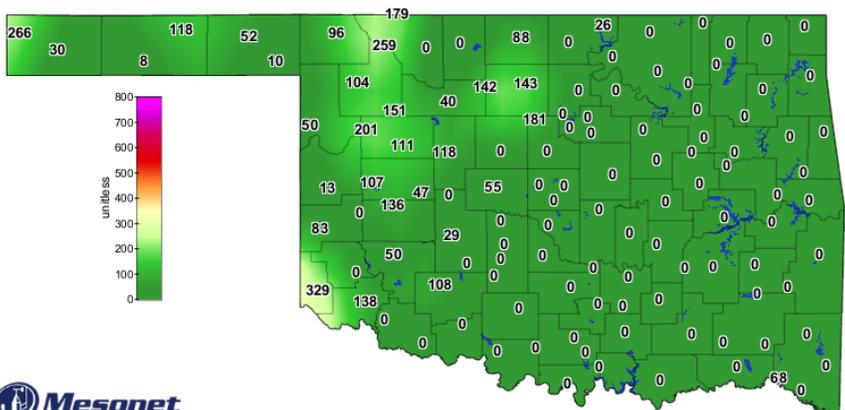
The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. All climate divisions had near normal or above normal precipitation for the 3-month, 12-month, and 24-month time periods. For the 12-month period, all regions except North Central and Northeast were Exceptionally Moist (+2 and above), the wettest SPI classification.

Keetch-Byram Drought Fire Index

MESONET STATION	CLIMATE DIVISION	CURRENT VALUE
Hollis	Southwest	329
Kenton	Northwest	266
Freedom	North Central	259

- Stations currently at or above 600 (December 27) = 0
- Stations above 600 on November 29 = 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.



Mesonet
Keetch-Byram Drought Index

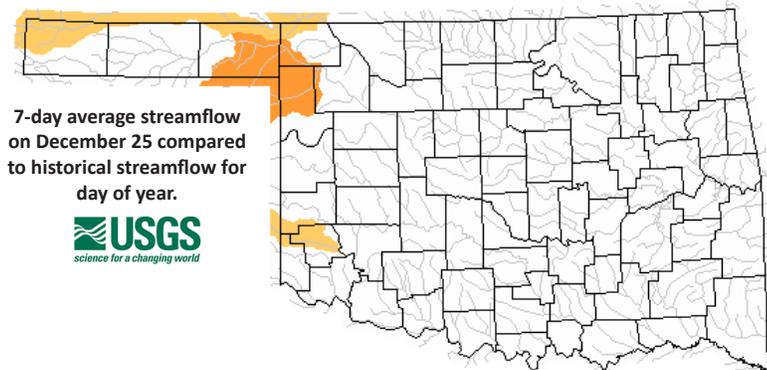
6:00 PM December 27, 2015 CST
Created 7:14:04 PM December 27, 2015 CST. © Copyright 2015

STREAMFLOW CONDITIONS

December 25, 2015

Explanation - Percentile classes				
Low	≤5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

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

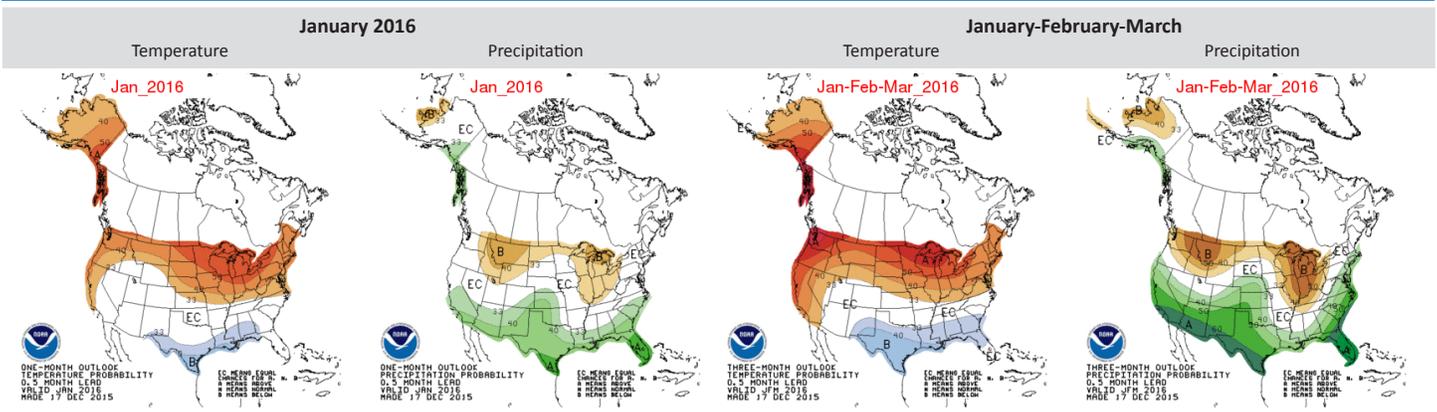


7-day average streamflow on December 25 compared to historical streamflow for day of year.



WEATHER/DROUGHT FORECAST

Seasonal Outlook

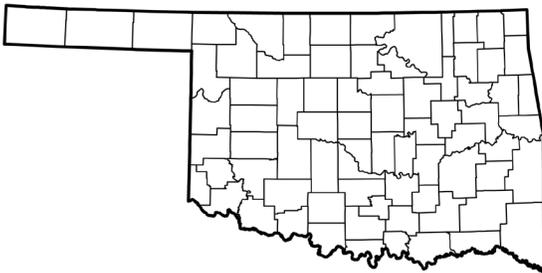


The contours on the maps show the total probability of three categories—above, indicated by the letter “A”; below, indicated by the letter “B”; and the middle category, indicated by the letter “N”. “EC” stands for “Equal Chances” for A, N, or B

Regional Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

December 22, 2015
(Released Thursday, Dec. 24, 2015)
Valid 7 a.m. EST



Author:
Richard Heim
NCEI/NOAA



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

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 12/15/2015	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 9/22/2015	52.80	47.20	10.85	3.30	0.69	0.00
Start of Calendar Year 12/30/2014	25.63	74.37	62.03	40.84	21.74	5.70
Start of Water Year 9/29/2015	52.60	47.40	16.79	6.37	0.97	0.00
One Year Ago 12/23/2014	25.63	74.37	62.03	40.84	21.67	5.71

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.

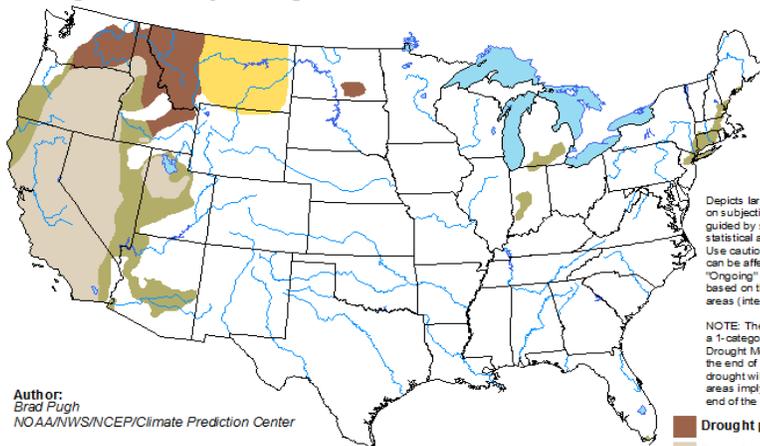
According to the U.S. Drought Monitor, the number of Oklahomans currently affected by drought (category D1-D4) is 0, down by more than 400,000 from this time last month. Currently, none of the state is even experiencing abnormally dry conditions. A year ago more than 62% of the state was suffering from drought, and nearly 6% of the state was in Exceptional Drought, the worst category.

According to the seasonal drought outlook, from mid December through the end of March drought conditions are not likely to develop in any parts of Oklahoma.

Drought is likely to persist or intensify in parts of Washington, western Montana, and northern Idaho. Drought development is likely in central and eastern Montana. Drought will likely improve in most parts of Oregon, California, and Nevada.

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

Valid for December 17 - March 31, 2016
Released December 17, 2015



Author:
Brad Pugh
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



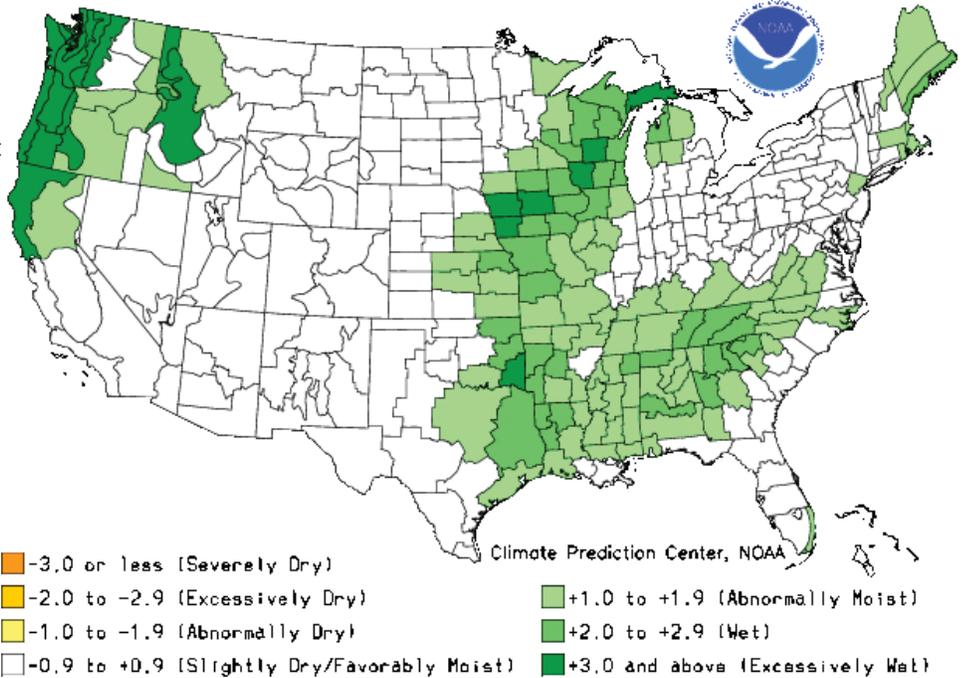
<http://go.usa.gov/3eZ73>

CROP REPORT

According to the NOAA Crop Moisture Index by Division, for the period ending December 19, all climate regions in western Oklahoma, plus the North Central and Central regions, were classified as Slightly Dry to Favorably Moist. The South Central region was Abnormally Moist, the Northeast and East Central regions were Wet, and the Southeast region was Excessively Wet.

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.

Crop Moisture Index by Division
Weekly Value for Period Ending DEC 19, 2015
Short Term Need vs. Available Water in a Shallow Soil Profile



RESERVOIR STORAGE

Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 12/22/2015

