Oklahoma Water Resources Bulletin
& Summary of Current Conditions

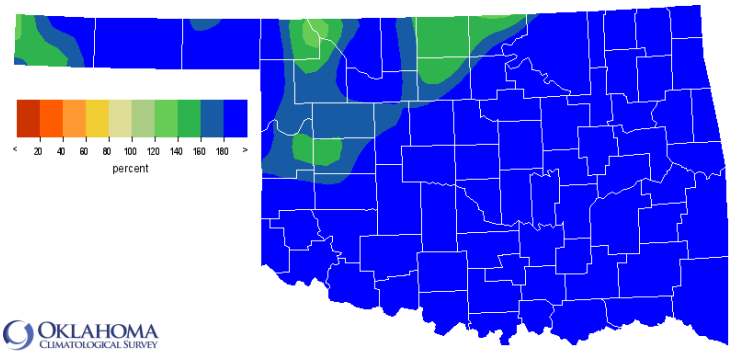
OWRB the water agency

November 29, 2015

Precipitation

Statewide Precipitation

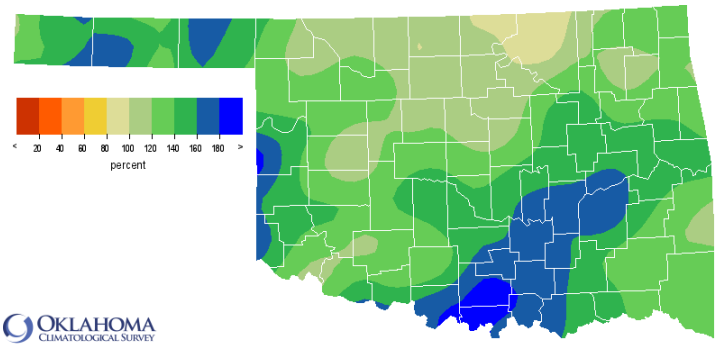
Climate Division	Last 30 Days (October 30, 2015 – November 28, 2015) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days (November 29, 2014 – November 28, 2015) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	1.83"	+0.97"	213%	18th wettest	29.89"	+9.31"	145%	2nd wettest
NORTH CENTRAL	3.05"	+1.26"	171%	19th wettest	34.70"	+3.28"	110%	23rd wettest
NORTHEAST	8.03"	+4.89"	256%	2nd wettest	50.11"	+7.44"	117%	10th wettest
WEST CENTRAL	2.79"	+1.24"	180%	16th wettest	38.77"	+10.37"	137%	5th wettest
CENTRAL	6.57"	+4.09"	265%	4th wettest	49.44"	+11.81"	131%	4th wettest
EAST CENTRAL	9.04"	+5.13"	231%	2nd wettest	69.55"	+23.41"	151%	1st wettest
SOUTHWEST	4.83"	+3.03"	268%	6th wettest	41.18"	+10.91"	136%	2nd wettest
SOUTH CENTRAL	10.12"	+7.23"	350%	1st wettest	67.33"	+26.62"	165%	1st wettest
SOUTHEAST	12.65"	+7.95"	269%	2nd wettest	67.24"	+16.65"	133%	5th wettest
STATEWIDE	6.53"	+3.98"	256%	1st wettest	49.67"	+13.20"	136%	1st wettest



Oklahoma Climatological Survey

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Oct 30, 2015 through Nov 28, 2015



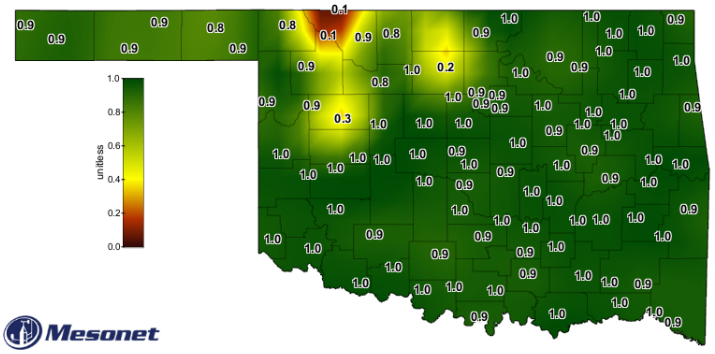
Oklahoma Climatological Survey

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Nov 29, 2014 through Nov 28, 2015

Soil Moisture

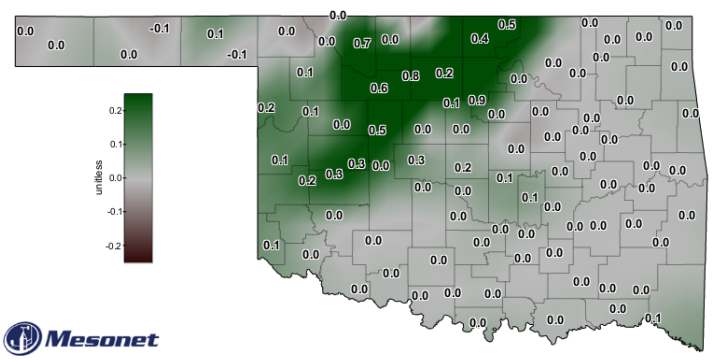
Fractional Water Index
November 28, 2015



Mesonet

Daily Averaged Fractional Water Index at 10 inches

November 28, 2015



Mesonet

7-Day Change in Fractional Water Index at 10 inches

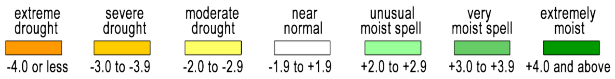
November 28, 2015

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)

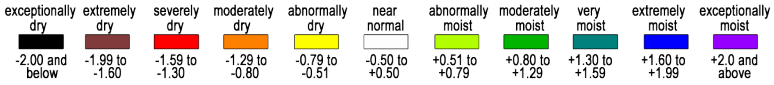
Climate Division	Status 11/21/15	Value 10/24	Value 11/21	Change in Value
NORTHWEST	Extremely Moist	4.14	4.22	-0.08
NORTH CENTRAL	Near Normal	0.66	0.54	0.12
NORTHEAST	Near Normal	0.58	1.58	-1
WEST CENTRAL	Near Normal	1.75	1.65	0.1
CENTRAL	Unusual Moist Spell	1.45	2.05	-0.6
EAST CENTRAL	Extremely Moist	3.34	4.03	-0.69
SOUTHWEST	Near Normal	1.36	1.94	-0.58
SOUTH CENTRAL	Very Moist	2.19	3.05	-0.86
SOUTHEAST	Near Normal	-0.2	1.53	-1.73



The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland. According to the latest PDSI, the North Central and West Central regions have experienced a small moisture decrease but all other regions have experienced a moisture increase. All regions remain near normal or wetter.

Standardized Precipitation Index (SPI)
Through October 2015

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



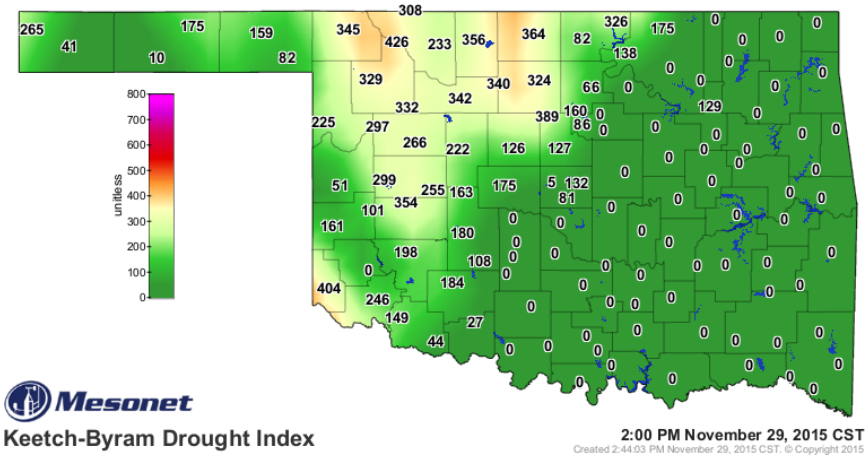
The SPI provides a comparison of precipitation over several specified periods with totals from the same periods for all years included in the historical record. All climate divisions had near normal or above normal precipitation for the 12-month and 24-month time periods. For the 3-month time period, the North Central, Northeast, Central, East Central, and Southeast regions were abnormally dry or worse.

Keetch-Byram Drought Fire Index

MESONET STATION	CLIMATE DIVISION	CURRENT VALUE
Freedom	North Central	426
Hollis	Southwest	404
Marshall	Central	389

- Stations currently at or above 600 (November 29) = 0
- Stations above 600 on October 27 = 2

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.

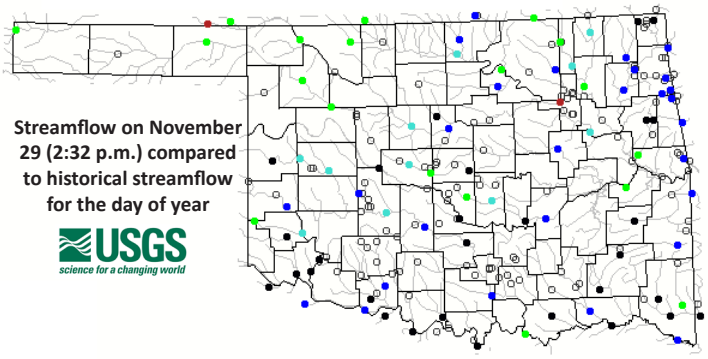


Streamflow Conditions

November 29, 2015

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.

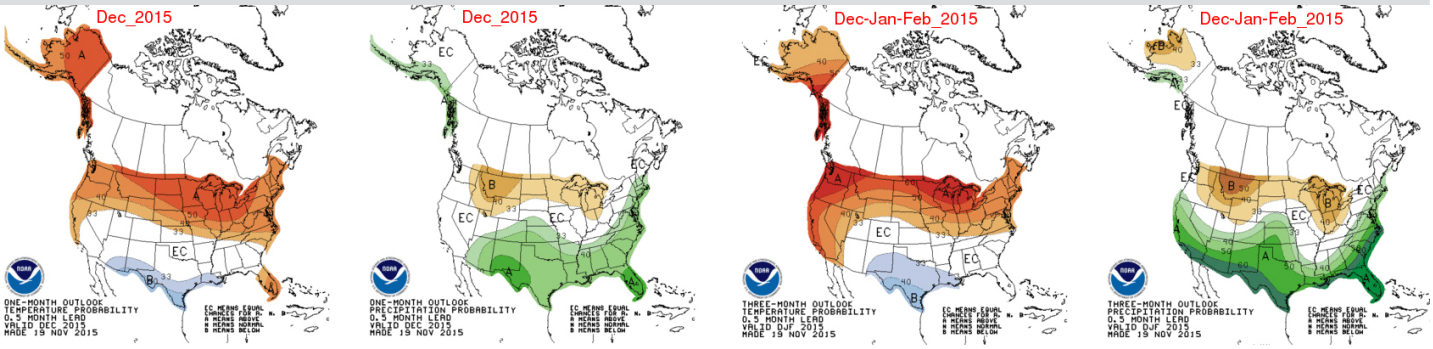


Weather/Drought Forecast

Seasonal Outlook

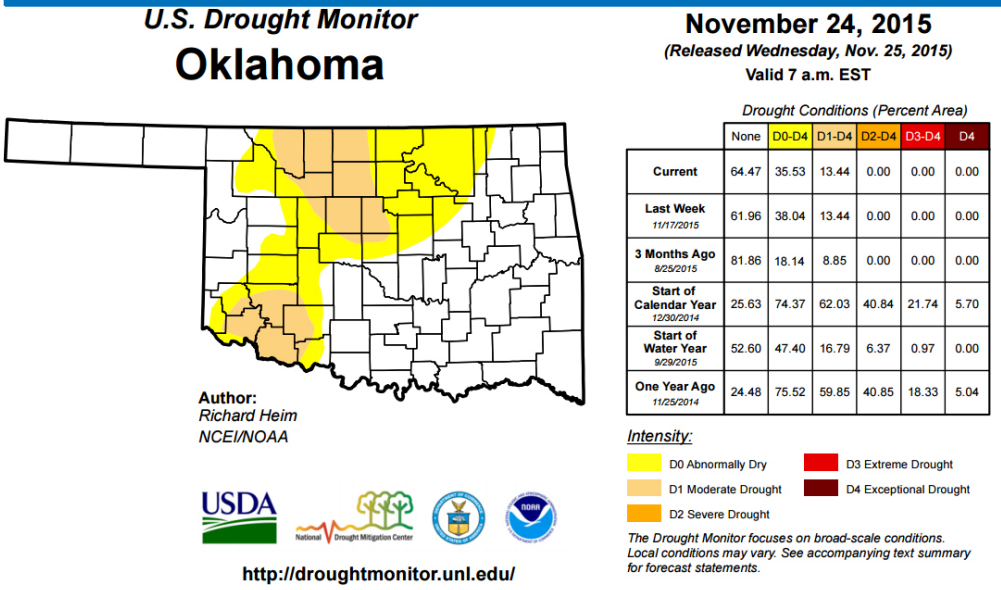
December | **December-January-February**

Temperature | Precipitation | 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



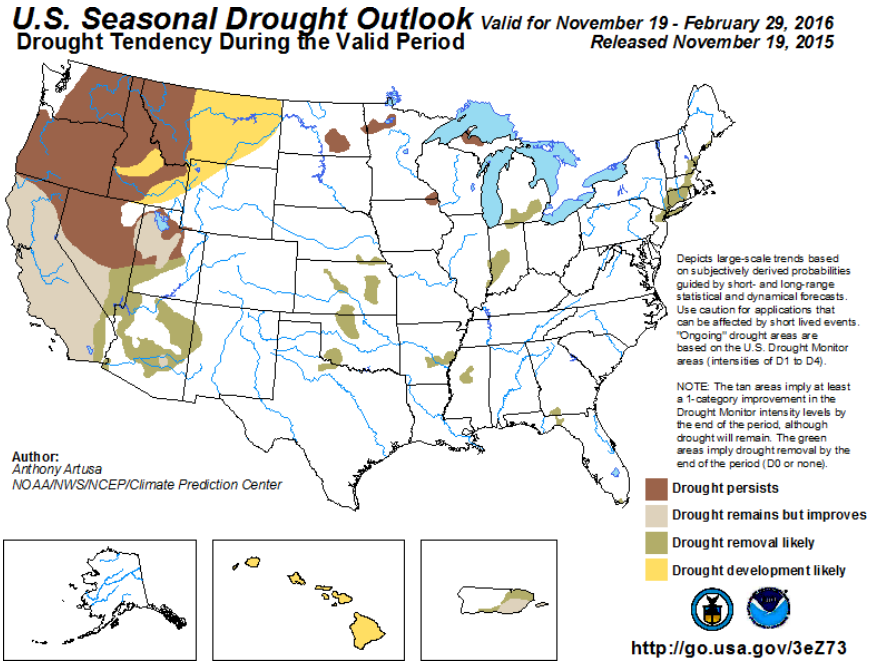
Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	64.47	35.53	13.44	0.00	0.00	0.00
Last Week 11/17/2015	61.96	38.04	13.44	0.00	0.00	0.00
3 Months Ago 8/25/2015	81.86	18.14	8.85	0.00	0.00	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 11/25/2014	24.48	75.52	59.85	40.85	18.33	5.04

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 401,039, down by nearly 1.4 million from this time last month. About 13.4% of the state is classified as experiencing moderate drought conditions, but 0% of the state is experiencing Severe Drought or worse. Most of the state (64.5%) is not experiencing dry conditions at all at this time. A year ago nearly 60% of the state was affected by drought, and 6% of the state was in Exceptional Drought, the worst category.

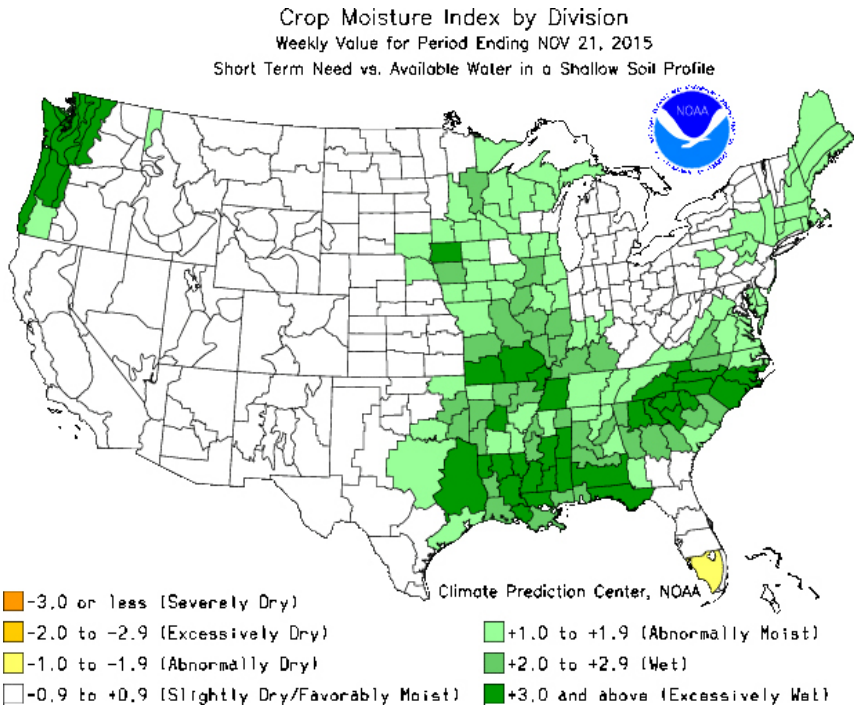
According to the seasonal drought outlook, from mid November through the end of February drought conditions are not likely to develop in any parts of Oklahoma.

Drought is likely to persist or intensify in a huge area along the west coast, reaching inland through Idaho and Nevada and into parts of Montana and Utah. Drought is likely to develop further eastward into Utah, Montana, and western Wyoming as well.

Crop Report

According to the NOAA Crop Moisture Index by Division, for the period ending November 21, all climate regions in western Oklahoma, plus the North Central and Central regions, were slightly dry to favorably moist. The Northeast and South Central regions were abnormally moist, while the East Central and Southeast regions were classified as being 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.



Reservoir Storage

Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 11/24/2015