

# Oklahoma Water Resources Bulletin & Summary of Current Conditions

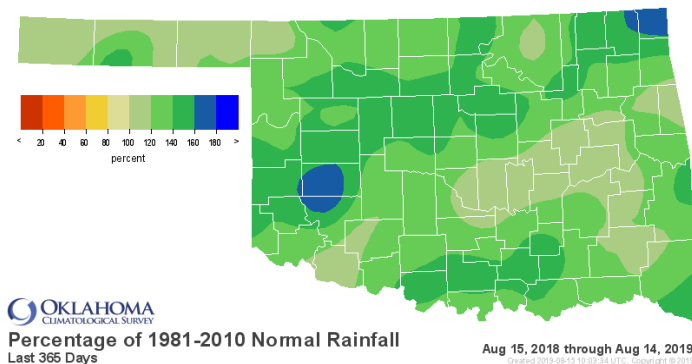
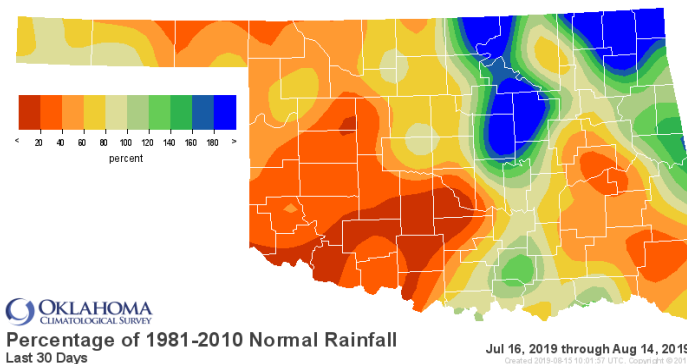


August 15, 2019

## PRECIPITATION

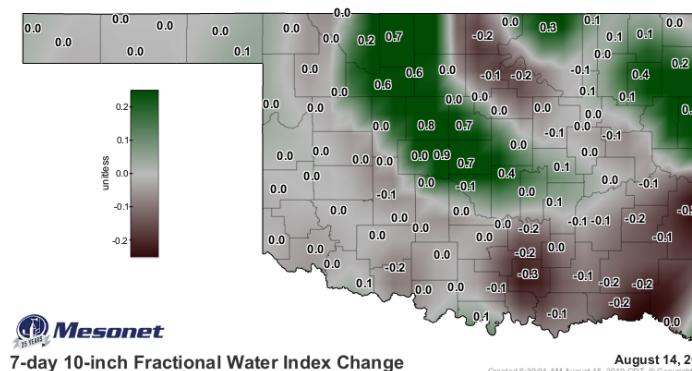
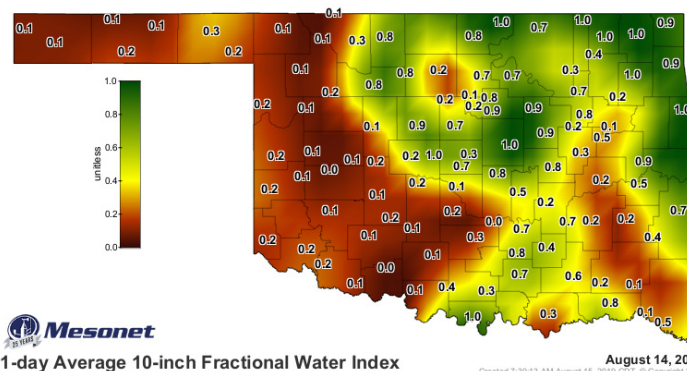
### Statewide Precipitation

Climate Division	Last 30 Days July 16, 2019 – August 14, 2019				Last 365 Days August 15, 2018 – August 14, 2019			
	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	1.59"	-1.03"	61%	23rd driest	23.95"	+3.37"	116%	16th wettest
NORTH CENTRAL	2.55"	-0.25"	91%	48th wettest	43.11"	+11.69"	137%	3rd wettest
NORTHEAST	4.62"	+1.48"	147%	23rd wettest	59.08"	+16.41"	138%	4th wettest
WEST CENTRAL	0.83"	-1.58"	35%	17th driest	43.91"	+15.51"	155%	2nd wettest
CENTRAL	2.58"	-0.18"	93%	45th wettest	50.29"	+12.66"	134%	4th wettest
EAST CENTRAL	2.65"	-0.42"	86%	49th driest	54.32"	+8.18"	118%	11th wettest
SOUTHWEST	0.62"	-1.62"	28%	14th driest	39.91"	+9.64"	132%	8th wettest
SOUTH CENTRAL	1.70"	-0.68"	72%	38th driest	54.94"	+14.23"	135%	4th wettest
SOUTHEAST	1.76"	-1.31"	57%	20th driest	64.41"	+13.82"	127%	7th wettest
STATEWIDE	2.19"	-0.54"	80%	39th driest	48.18"	+11.71"	132%	1st wettest



## SOIL MOISTURE

### Fractional Water Index August 14, 2019



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 July 2019		
Climate Division	Status 8/10/19	Value 6/08	8/10	Change in Value	3-month	12-month	24-month
NORTHWEST	Unusual Moist Spell	4.51	2.88	1.63(-)	Moderately Moist	Extremely Moist	Very Moist
NORTH CENTRAL	Very Moist Spell	6.47	3.48	2.99(-)	Exceptionally Moist	Exceptionally Moist	Extremely Moist
NORTHEAST	Extremely Moist	4.77	4.29	0.48(-)	Exceptionally Moist	Extremely Moist	Abnormally Moist
WEST CENTRAL	Unusual Moist Spell	6.34	2.65	3.69(-)	Extremely Moist	Exceptionally Moist	Extremely Moist
CENTRAL	Unusual Moist Spell	5.28	2.56	2.72(-)	Extremely Moist	Exceptionally Moist	Extremely Moist
EAST CENTRAL	Unusual Moist Spell	3.3	2.05	1.25(-)	Moderately Moist	Very Moist	Abnormally Moist
SOUTHWEST	Near Normal	4.72	0.30	4.42(-)	Moderately Moist	Extremely Moist	Very Moist
SOUTH CENTRAL	Near Normal	4.59	1.54	3.05(-)	Moderately Moist	Exceptionally Moist	Extremely Moist
SOUTHEAST	Unusual Moist Spell	4.34	2.56	1.78(-)	Very Moist	Exceptionally Moist	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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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, as of August 10, the Southwest and South Central regions were near normal but the rest of the state's climate regions were above normal.

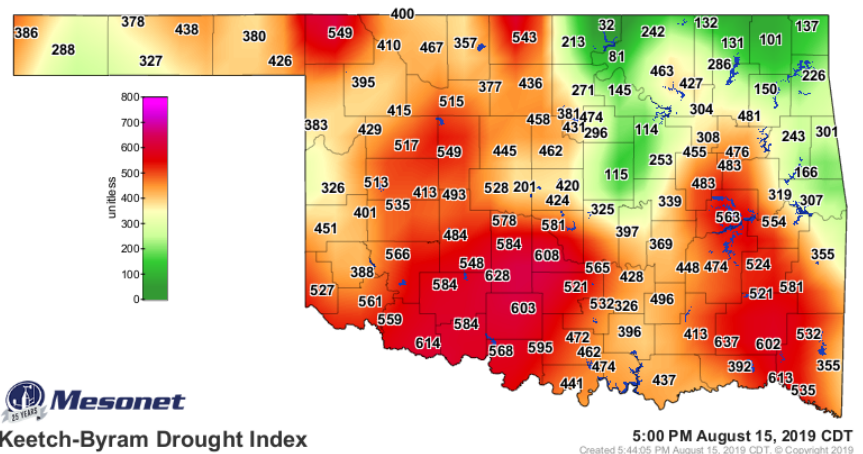
  

exceptionally dry -2.00 and below	extremely dry -1.99 to -1.60	severely dry -1.59 to -1.30	moderately dry -1.29 to -0.80	abnormally dry -0.79 to -0.51	near normal -0.50 to +0.50	abnormally moist +0.51 to +0.79	moderately moist +0.80 to +1.29	very moist +1.30 to +1.59	extremely moist +1.60 to +1.99	exceptionally 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 all three time periods shown, all climate regions were moderately moist or wetter.

## Keetch-Byram Drought Fire Index

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

August 15, 2019

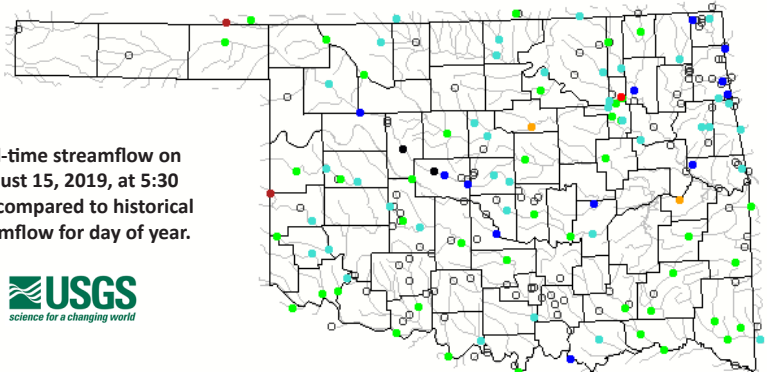
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not ranked

Visit [waterwatch.usgs.gov](http://waterwatch.usgs.gov) for real-time streamflow information.

Real-time streamflow on August 15, 2019, at 5:30 p.m. compared to historical streamflow for day of year.

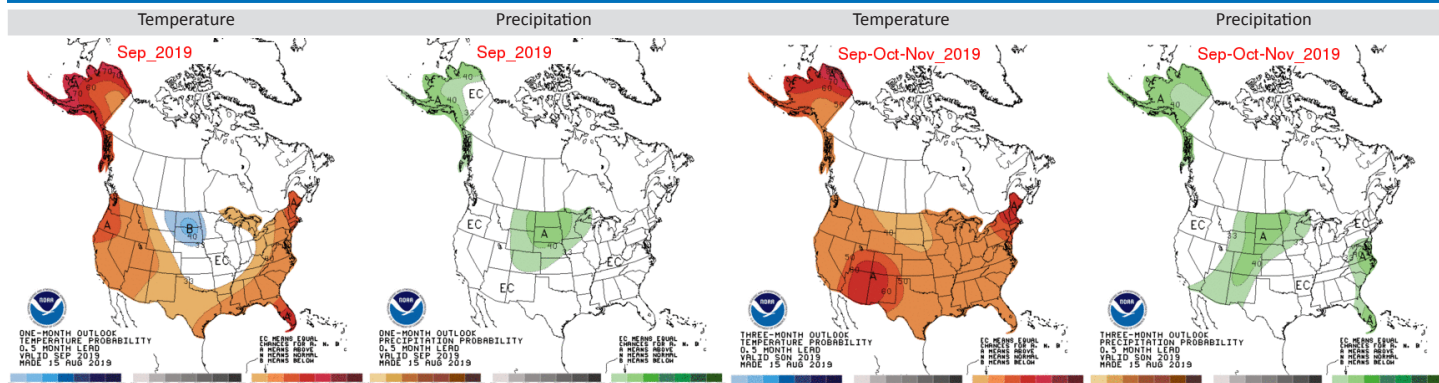


Thursday, August 15, 2019 18:30ET



# 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.

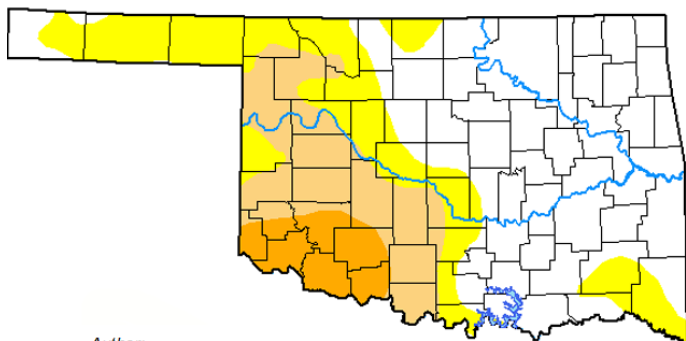
## Drought Summary & Outlook

### U.S. Drought Monitor Oklahoma

August 13, 2019

(Released Thursday, Aug. 15, 2019)

Valid 8 a.m. EDT



Author:  
Richard Tinker  
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

#### Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	53.29	46.71	23.63	6.91	0.00	0.00
Last Week 08-06-2019	54.55	45.45	15.08	3.70	0.00	0.00
3 Months Ago 05-14-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2019	94.85	5.15	0.00	0.00	0.00	0.00
Start of Water Year 09-25-2018	72.93	27.07	9.11	4.16	0.00	0.00
One Year Ago 08-14-2018	30.28	69.72	46.86	25.68	6.30	2.55

#### Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

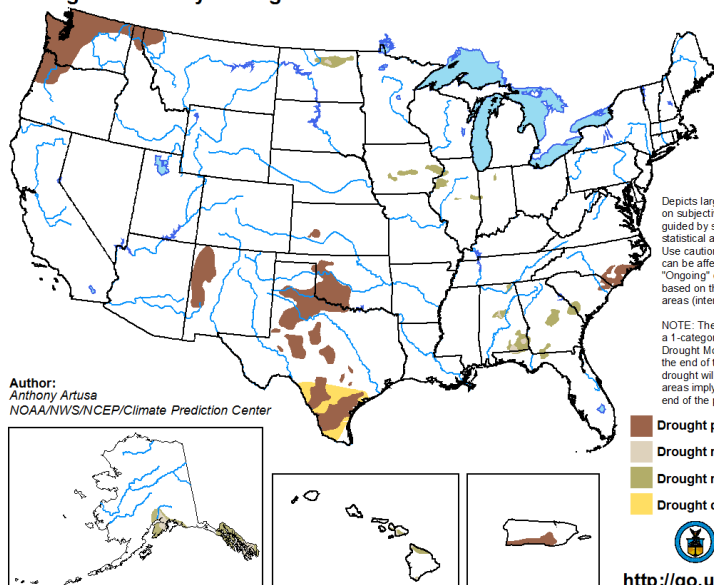
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

According to the latest U.S. Drought Monitor, as of August 13, the estimated Oklahoma population in drought areas was 423,492. In Southwest Oklahoma, 6.91% of the state in area has been moved into the D2 (Severe Drought) intensity classification, and 23.63% of the state is in D1 (Moderate Drought).

According to the latest seasonal drought outlook for the period of August 15, 2019, through November 30, 2019, drought is predicted to persist in southwest Oklahoma.

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

Valid for August 15 - November 30, 2019  
Released August 15



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>

## RESERVOIR STORAGE

### Oklahoma Surface Water Resources Reservoir Levels and Storage as of 8/13/2019

