

# Oklahoma Water Resources Bulletin & Summary of Current Conditions

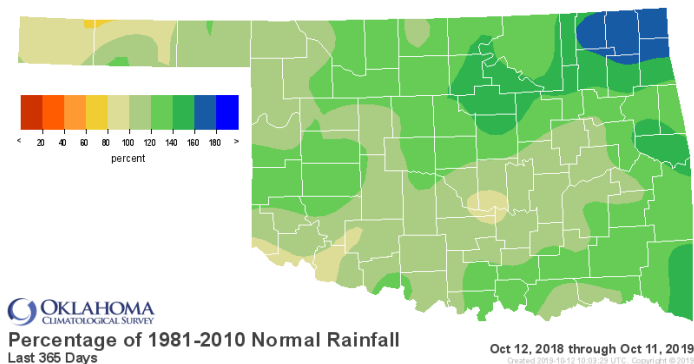
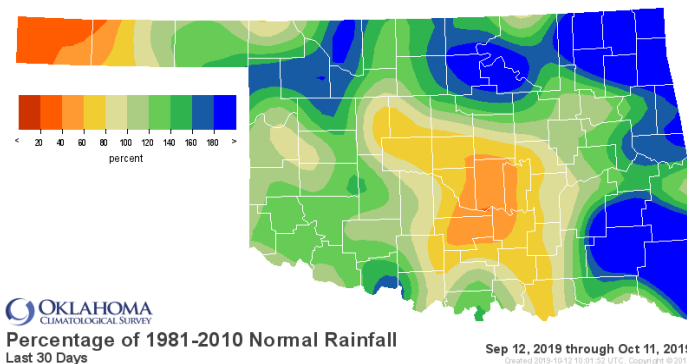


October 12, 2019

## PRECIPITATION

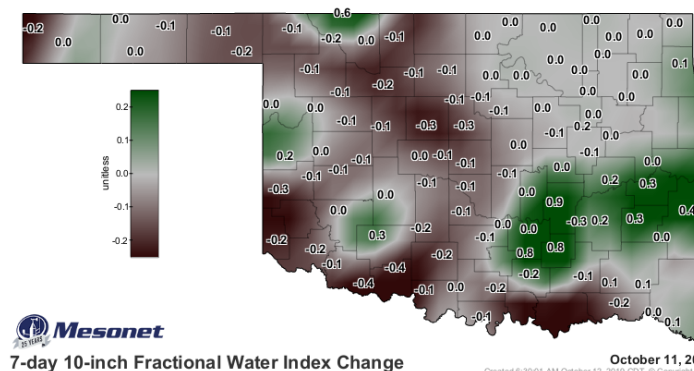
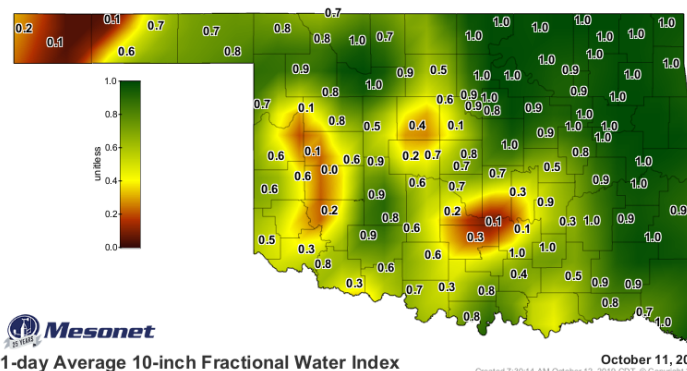
### Statewide Precipitation

Climate Division	Last 30 Days September 12, 2019 – October 11, 2019				Last 365 Days October 12, 2018 – October 11, 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	1.60"	-0.08"	95%	47th wettest	20.99"	+0.41"	102%	43rd wettest
NORTH CENTRAL	4.74"	+1.75"	158%	20th wettest	40.09"	+8.67"	128%	8th wettest
NORTHEAST	8.11"	+3.75"	186%	10th wettest	62.85"	+20.18"	147%	2nd wettest
WEST CENTRAL	3.37"	+0.55"	120%	35th wettest	36.57"	+8.17"	129%	7th wettest
CENTRAL	3.70"	-0.04"	99%	38th wettest	47.84"	+10.21"	127%	8th wettest
EAST CENTRAL	6.38"	+1.75"	138%	21st wettest	57.41"	+11.27"	124%	10th wettest
SOUTHWEST	3.58"	+0.68"	123%	36th wettest	33.56"	+3.29"	111%	24th wettest
SOUTH CENTRAL	3.19"	-0.61"	84%	49th wettest	46.75"	+6.04"	115%	17th wettest
SOUTHEAST	8.81"	+4.53"	206%	6th wettest	65.84"	+15.25"	130%	8th wettest
STATEWIDE	4.76"	+1.28"	137%	24th wettest	45.79"	+9.32"	126%	6th wettest



## SOIL MOISTURE

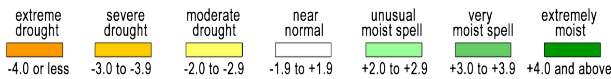
### Fractional Water Index October 11, 2019



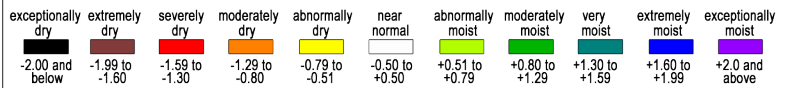
The Fractional Water Index ranges from very dry soil having a value of 0 to soil at field capacity illustrated by a value of 1.  
[1.0-0.8 = Enhanced Growth; 0.8-0.5 = Limited Growth; 0.5-0.3 = Plants Wilting; 0.3-0.1 = Plants Dying; <0.1 = Barren Soil.]

## DROUGHT INDICES

Palmer Drought Severity Index (PDSI)					Standardized Precipitation Index (SPI) Through September 2019		
Climate Division	Status 10/5/19	Value 9/7	Value 10/5	Change in Value	3-month	12-month	24-month
NORTHWEST	Very Moist Spell	3.12	3.63	0.51(+)	Abnormally Dry	Very Moist	Moderately Moist
NORTH CENTRAL	Extremely Moist	4.16	4.92	0.76(+)	Near Normal	Exceptionally Moist	Extremely Moist
NORTHEAST	Extremely Moist	4.69	5.19	0.5(+)	Very Moist	Exceptionally Moist	Very Moist
WEST CENTRAL	Unusual Moist Spell	2.10	2.36	0.26(+)	Near Normal	Exceptionally Moist	Very Moist
CENTRAL	Very Moist Spell	4.13	3.64	0.49(-)	Near Normal	Extremely Moist	Extremely Moist
EAST CENTRAL	Very Moist Spell	3.06	2.96	0.1(-)	Abnormally Moist	Very Moist	Very Moist
SOUTHWEST	Near Normal	-0.20	0.47	0.67(+)	Near Normal	Very Moist	Moderately Moist
SOUTH CENTRAL	Near Normal	2.45	1.89	0.56(-)	Near Normal	Very Moist	Very Moist
SOUTHEAST	Unusual Moist Spell	1.97	2.87	0.9(+)	Near Normal	Extremely Moist	Extremely Moist

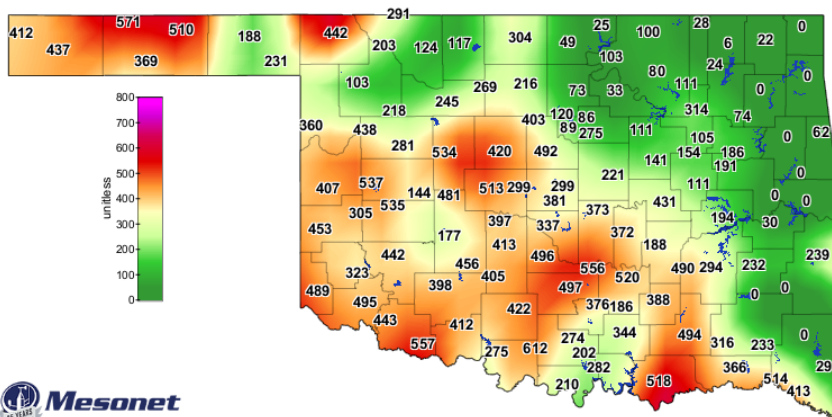


The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland, spanning from -10 (dry) to +10 (wet). According to the latest PDSI, as of October 5, the Southwest and South Central regions were near normal but the rest of the state's climate regions were above normal.



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 near normal or wetter except the Panhandle region, which was abnormally dry for the 3-month period.

## 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.



Keetch-Byram Drought Index

9:00 AM October 12, 2019 CDT  
Created 9:59:05 AM October 12, 2019 CDT. © Copyright 2019

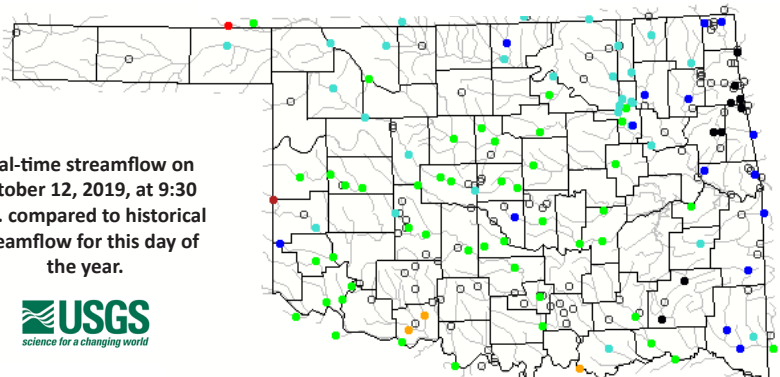
## STREAMFLOW CONDITIONS

October 12, 2019

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

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

Real-time streamflow on October 12, 2019, at 9:30 a.m. compared to historical streamflow for this day of the year.



# WEATHER/DROUGHT FORECAST

## Drought Summary for Oklahoma

### U.S. Drought Monitor Oklahoma

**October 8, 2019**  
(Released Thursday, Oct. 10, 2019)  
Valid 8 a.m. EDT

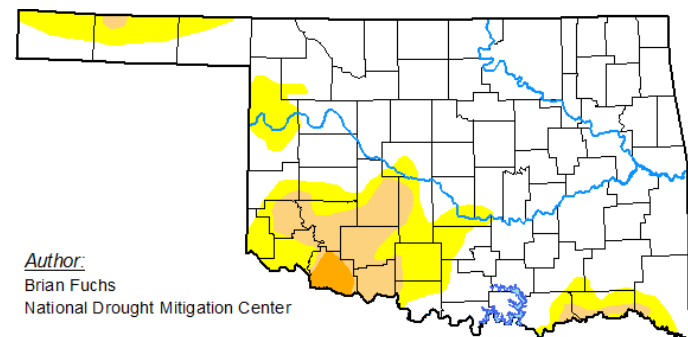
#### Intensity:

- None
- 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.



[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)



#### Author:

Brian Fuchs  
National Drought Mitigation Center

#### Drought Conditions (percent area)

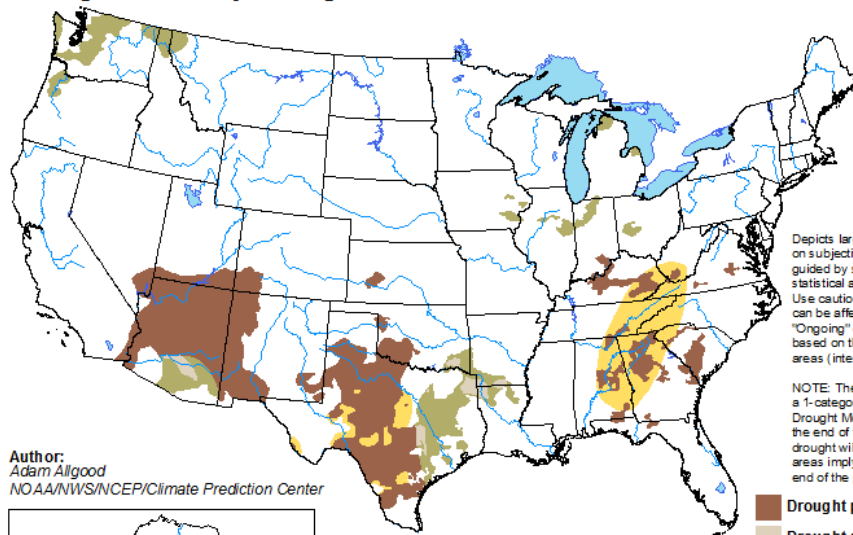
Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	10/8/2019	76.21	23.79	8.12	0.95	0	0	33
Last Week	10/1/2019	71.94	28.06	11.08	1.01	0	0	40
3 Months Ago	7/9/2019	99.98	0.02	0	0	0	0	0
Start of Calendar Year	1/1/2019	94.85	5.15	0	0	0	0	5
Start of Water Year	10/1/2019	71.94	28.06	11.08	1.01	0	0	40
One Year Ago	10/9/2018	88.12	11.88	2.29	0.37	0	0	15

According to the latest U.S. Drought Monitor, as of October 8, 2019, the estimated Oklahoma population living in areas experiencing drought was 181,802, down by more than 160,000 since this time last month. Less than 1% of the state in area remains in the D2 (Severe Drought) intensity classification, while 8.12% of the state is in D1 (Moderate Drought) or worse.

## Drought Probability

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

Valid for September 19 - December 31, 2019  
Released September 19



#### Author:

Adam Algood  
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).

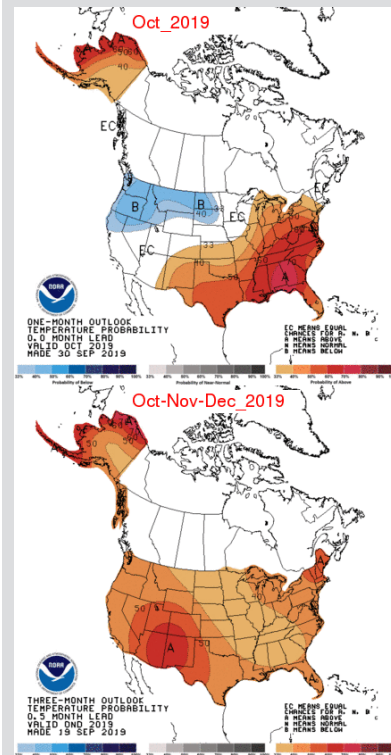
- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



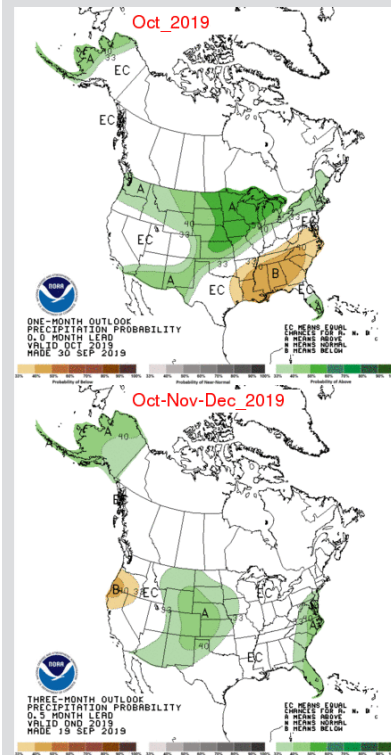
<http://go.usa.gov/3eZ73>

## Seasonal Outlook

### Temperature Probability



### Precipitation Probability



The contours on the maps above show the total probability of three categories. "Above" is indicated by the letter "A"; "Below" is indicated by the letter "B"; "EC" indicates "Equal Chances" for A or B.

# RESERVOIR STORAGE

## Oklahoma Surface Water Resources Reservoir Levels and Storage as of 10/7/2019

