Oklahoma Water Resources Bulletin
& Summary of Current Conditions

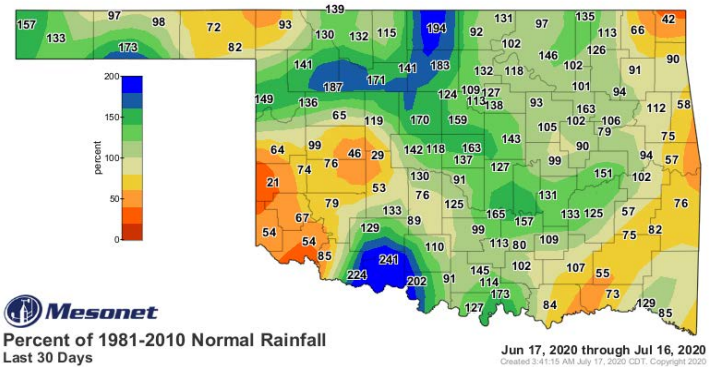
OWRB the water agency

July 17, 2020

Precipitation

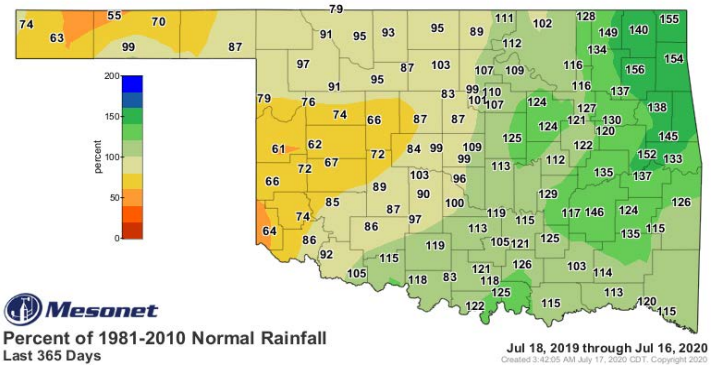
Statewide Precipitation

Climate Division	June 17, 2020 – July 16, 2020 Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days July 18, 2019 – July 16, 2020 Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	3.25"	+0.54"	120%	28th wettest	15.67"	-4.83"	76%	21st driest
NORTH CENTRAL	5.16"	+1.55"	143%	15th wettest	29.93"	-1.41"	95%	44th wettest
NORTHEAST	4.42"	+0.36"	109%	40th wettest	55.26"	+12.70"	130%	7th wettest
WEST CENTRAL	2.40"	-0.36"	87%	44th driest	20.29"	-8.05"	72%	14th driest
CENTRAL	4.72"	+1.02"	127%	22nd wettest	39.03"	+1.49"	104%	29th wettest
EAST CENTRAL	3.92"	+0.24"	107%	40th wettest	60.76"	+14.73"	132%	3rd wettest
SOUTHWEST	3.33"	+0.26"	109%	24th wettest	26.93"	-3.27"	89%	47th driest
SOUTH CENTRAL	4.54"	+1.02"	129%	21st wettest	46.84"	+6.22"	115%	17th wettest
SOUTHEAST	4.20"	+0.22"	106%	34th wettest	63.66"	+13.19"	126%	8th wettest
STATEWIDE	**4.08"**	**+0.60"**	**117%**	**24th wettest**	**39.87"**	**+3.49"**	**110%**	**21st wettest**



Percent of 1981-2010 Normal Rainfall
Last 30 Days

Jun 17, 2020 through Jul 16, 2020

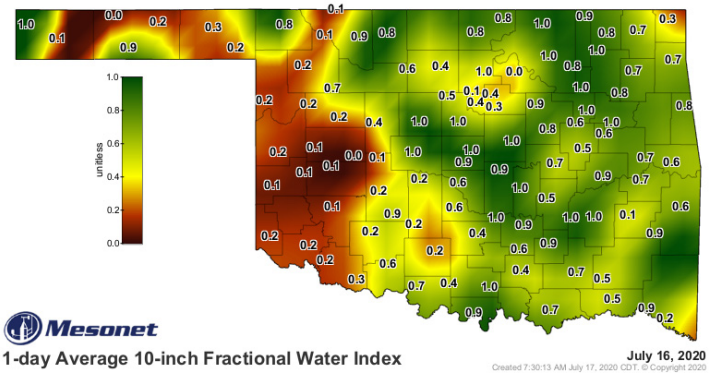


Percent of 1981-2010 Normal Rainfall
Last 365 Days

Jul 18, 2019 through Jul 16, 2020

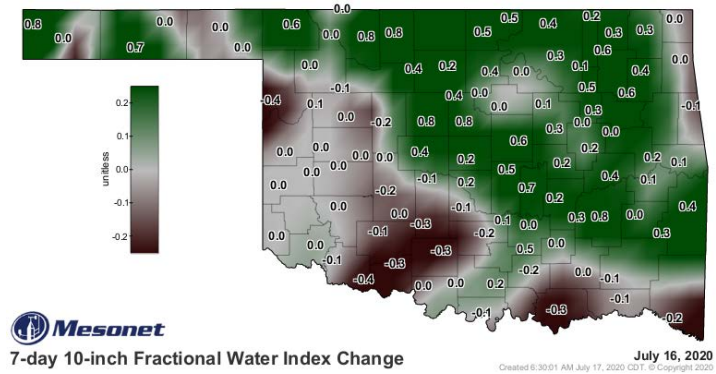
Soil Moisture

Fractional Water Index
July 16, 2020



1-day Average 10-inch Fractional Water Index

July 16, 2020



7-day 10-inch Fractional Water Index Change

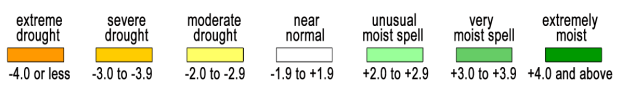
July 16, 2020

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)

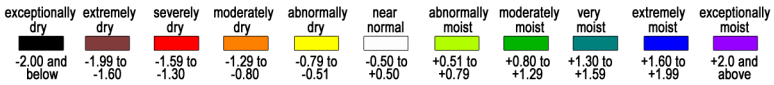
Climate Division	Status 07/11/20	Value 06/06	Value 07/11	Change in Value
NORTHWEST	Severe Drought	-2.14	-3.24	1.1(-)
NORTH CENTRAL	Near Normal	1.02	-0.18	1.2(-)
NORTHEAST	Near Normal	4.22	1.87	2.35(-)
WEST CENTRAL	Moderate Drought	-1.08	-2.36	1.28(-)
CENTRAL	Near Normal	2.48	0.83	1.65(-)
EAST CENTRAL	Unusual Moist Spell	4.3	1.93	2.37(-)
SOUTHWEST	Near Normal	0.41	-0.74	1.15(-)
SOUTH CENTRAL	Near Normal	3.08	1.66	1.42(-)
SOUTHEAST	Unusual Moist Spell	4.14	2.31	1.83(-)



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 July 11, the Northwest region was experiencing Severe Drought conditions and the West Central region was experiencing Moderate Drought.

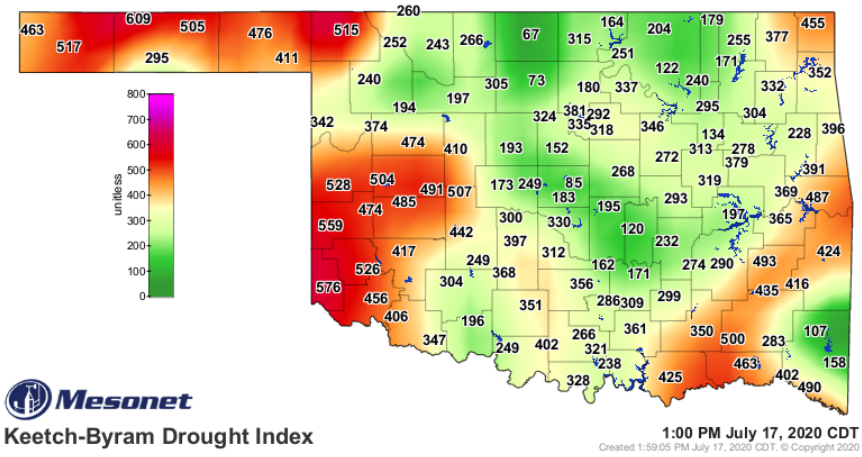
Standardized Precipitation Index (SPI)
Through June 2020

3-month	12-month	24-month
Extremely Dry	Moderately Dry	Moderately Moist
Extremely Dry	Near Normal	Extremely Moist
Abnormally Dry	Very Moist	Exceptionally Moist
Extremely Dry	Abnormally Dry	Extremely Moist
Moderately Dry	Near Normal	Exceptionally Moist
Near Normal	Extremely Moist	Exceptionally Moist
Abnormally Dry	Near Normal	Very Moist
Near Normal	Moderately Moist	Exceptionally Moist
Abnormally Moist	Moderately Moist	Exceptionally 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. For the three-month period, the Northwest, North Central, Northeast, West Central, Central, and Southwest regions were drier than normal. For the 12-month period, The Northwest region was Moderately Dry and the West Central region was Abnormally dry.

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.

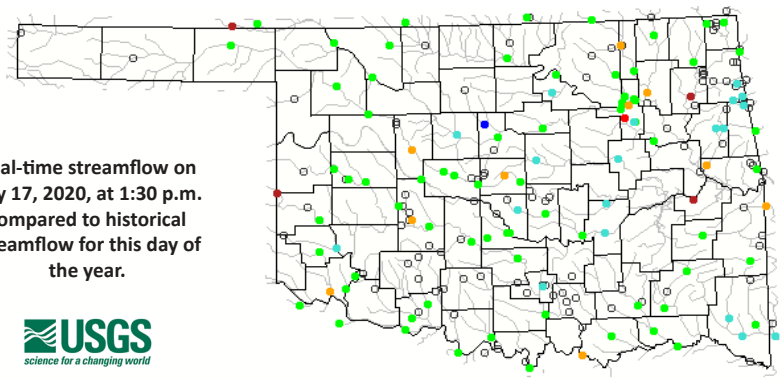
KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

Streamflow Conditions

July 17, 2020

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

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



Real-time streamflow on July 17, 2020, at 1:30 p.m. compared to historical streamflow for this day of the year.

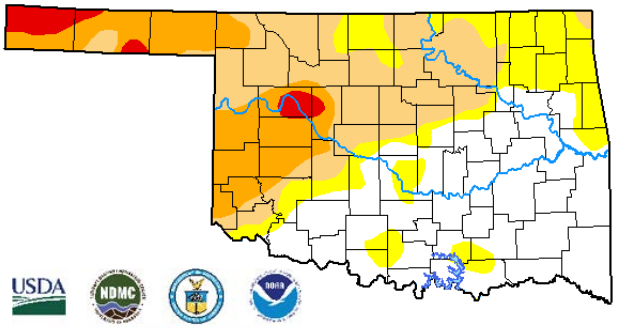
USGS science for a changing world

Weather/Drought Forecast

Drought Summary for Oklahoma

U.S. Drought Monitor

Oklahoma



droughtmonitor.unl.edu

July 14, 2020

(Released Thursday, July 16, 2020)

Valid 7 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.

Author: David Miskus
NOAA/NWS/NCEP/CPC

Drought Conditions (percent area)

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2020-07-14	39.08	60.92	43.16	18.15	2.99	0.00	125
Last Week	2020-07-07	33.10	66.90	51.27	21.29	3.74	0.00	143
3 Months Ago	2020-04-14	95.47	4.53	3.35	2.27	0.00	0.00	10
Start of Calendar Year	2019-12-31	76.45	23.55	10.47	3.64	0.00	0.00	38
Start of Water Year	2019-10-01	71.94	28.06	11.08	1.01	0.00	0.00	40
One Year Ago	2019-07-16	99.76	0.24	0.00	0.00	0.00	0.00	0

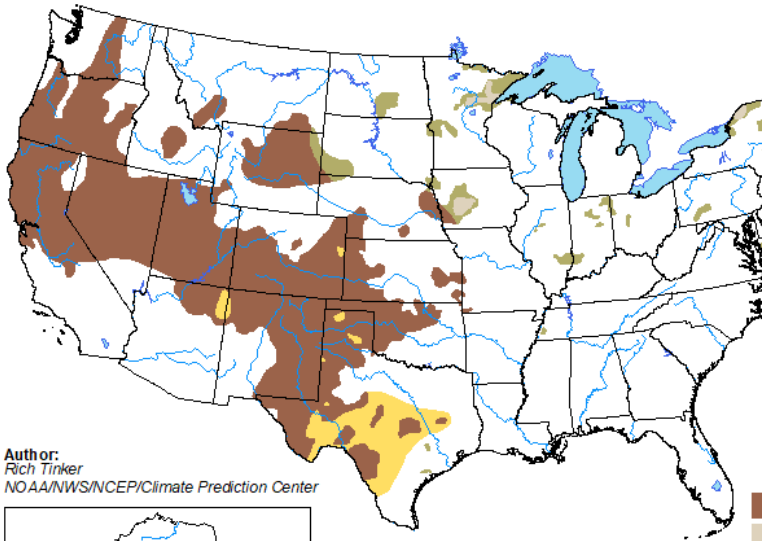
According to the latest U.S. Drought Monitor, as of July 14, 2020, the estimated Oklahoma population living in areas experiencing drought was 1,060,805, with 2.99% of the state in area experiencing Extreme Drought (D3), 18.15% of the state experiencing Severe Drought (D2) conditions or worse, and 43.16% experiencing Moderate Drought (D1) conditions or worse. A total of 60.92% of the state has Abnormally Dry (D0) conditions or worse.

Drought Probability

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for July 16 - October 31, 2020
Released July 16

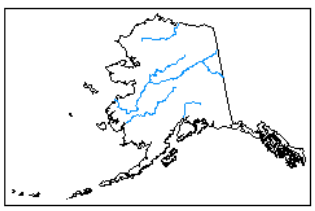


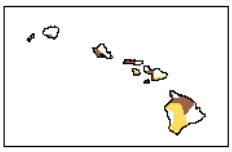
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to 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

Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

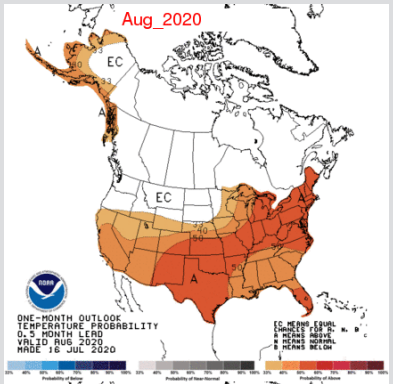


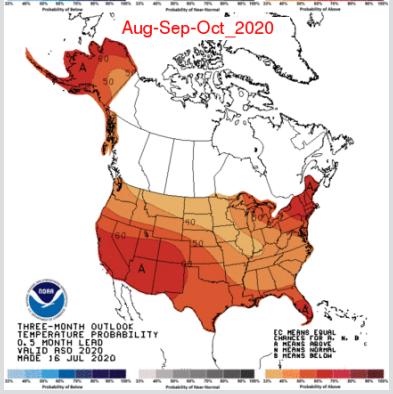


http://go.usa.gov/3eZ73

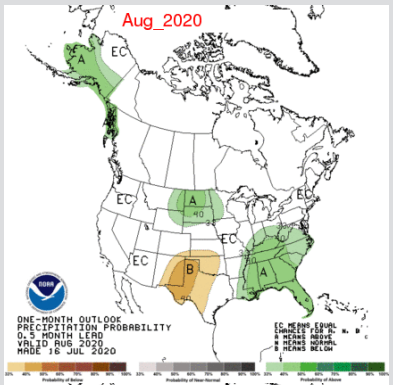
Seasonal Outlook

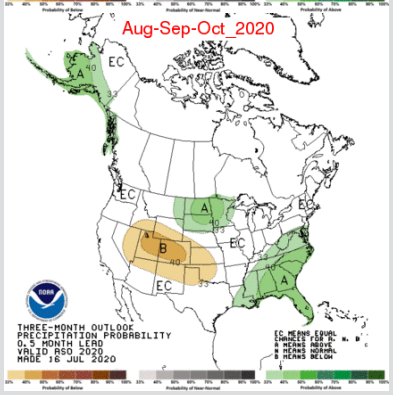
Temperature Probability





Precipitation Probability



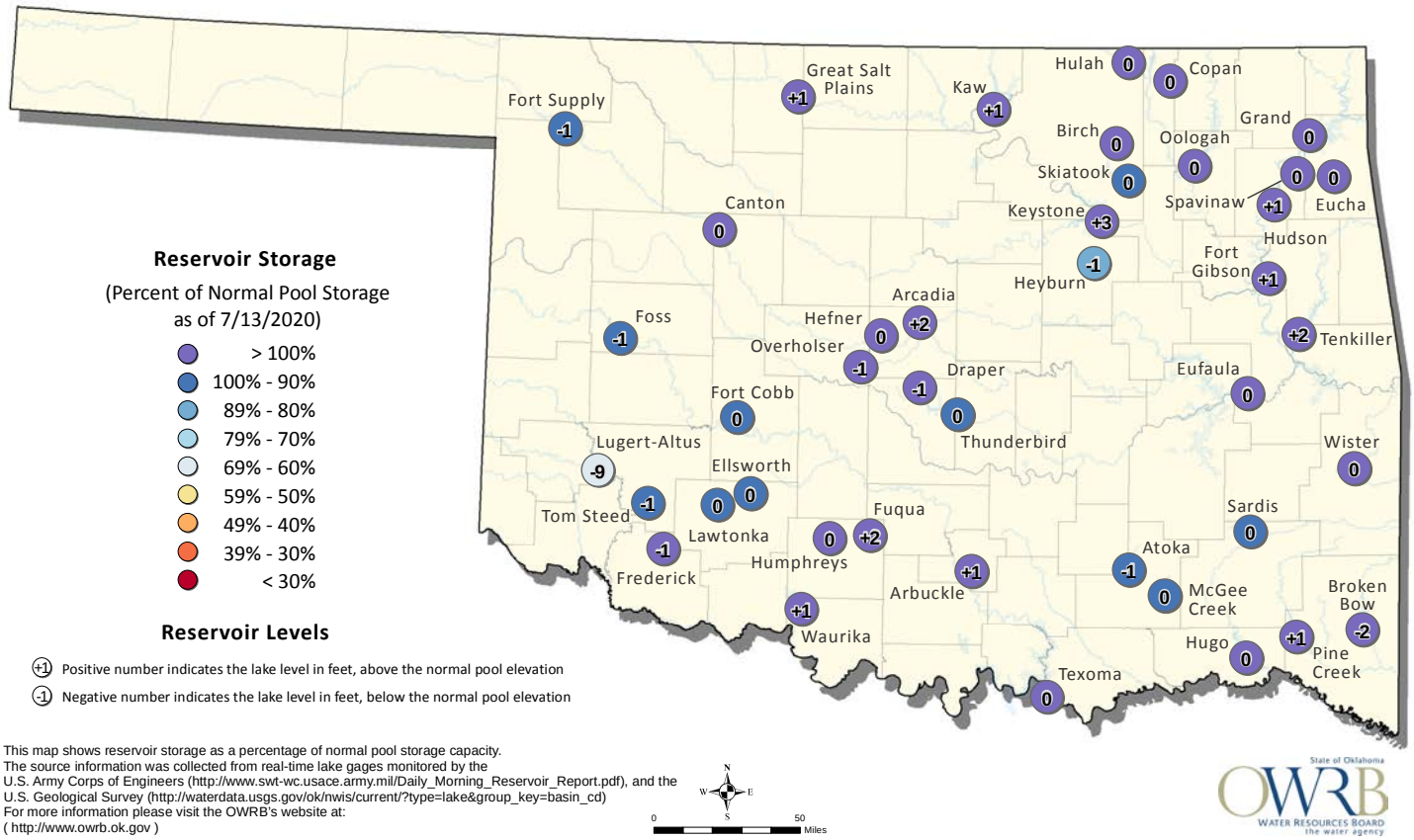


The contours on the maps above show the total probability of three categories. "Above" is indicated by the letter "A"; "Below" is indicated by the letter "B"; "EC" indicates "Equal Chances" for A or B.

Reservoir Storage

Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 7/13/2020



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