Oklahoma Water Resources Bulletin
& Summary of Current Conditions

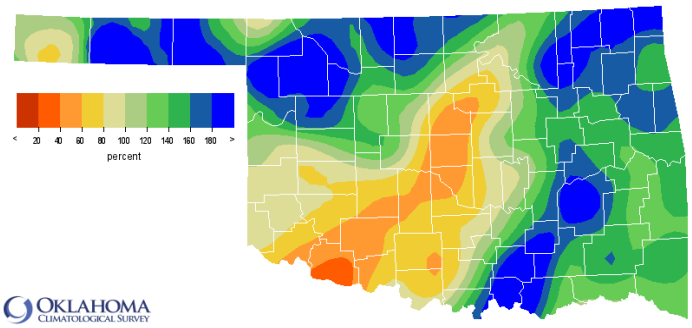
OWRB the water agency

January 16, 2020

Precipitation

Statewide Precipitation

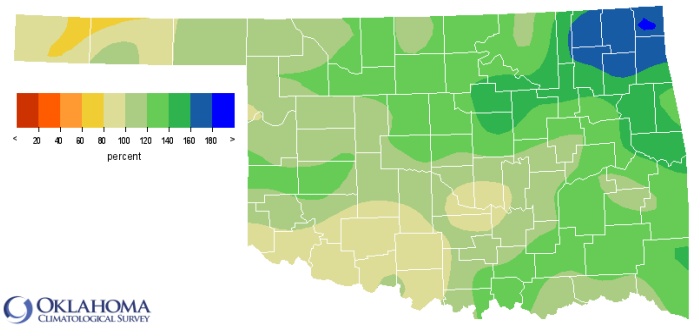
Climate Division	Last 30 Days (December 17, 2019 – January 15, 2020) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days (January 16, 2019 – January 15, 2020) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	0.93"	+0.27"	141%	15th wettest	20.16"	-0.42"	98%	50th wettest
NORTH CENTRAL	1.66"	+0.65"	164%	17th wettest	39.18"	+7.76"	125%	7th wettest
NORTHEAST	3.08"	+1.12"	157%	15th wettest	64.15"	+21.48"	150%	1st wettest
WEST CENTRAL	1.16"	+0.20"	121%	31st wettest	34.36"	+5.96"	121%	12th wettest
CENTRAL	1.24"	-0.30"	81%	43rd wettest	46.39"	+8.76"	123%	8th wettest
EAST CENTRAL	4.08"	+1.45"	155%	13th wettest	60.60"	+14.46"	131%	5th wettest
SOUTHWEST	0.78"	-0.34"	69%	47th wettest	30.07"	-0.20"	99%	36th wettest
SOUTH CENTRAL	2.80"	+0.62"	128%	19th wettest	44.69"	+3.98"	110%	20th wettest
SOUTHEAST	4.53"	+1.34"	142%	16th wettest	63.01"	+12.42"	125%	11th wettest
STATEWIDE	2.21"	+0.53"	131%	18th wettest	44.81"	+8.34"	123%	7th wettest



Oklahoma Climatological Survey

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Dec 17, 2019 through Jan 15, 2020



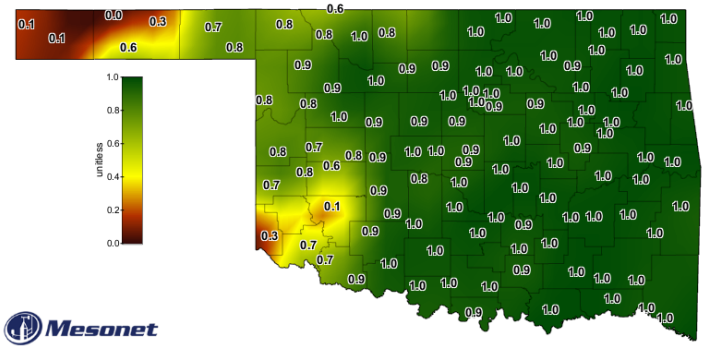
Oklahoma Climatological Survey

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Jan 16, 2019 through Jan 15, 2020

Soil Moisture

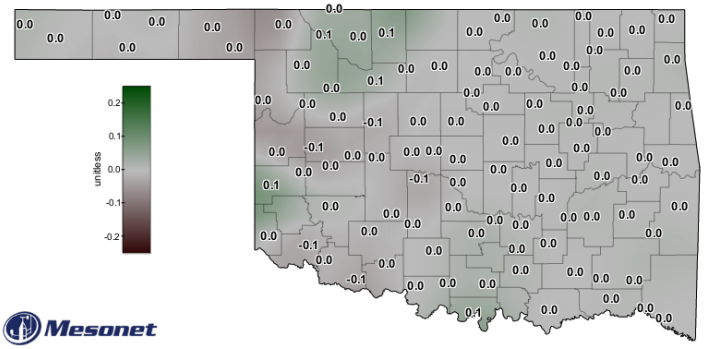
Fractional Water Index
January 15, 2020



Mesonet

1-day Average 10-inch Fractional Water Index

January 15, 2020



Mesonet

7-day 10-inch Fractional Water Index Change

January 15, 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 01/11/20	Value 10/05	Value 01/11	Change in Value
NORTHWEST	Unusual Moist Spell	3.63	2.39	1.24(-)
NORTH CENTRAL	Very Moist Spell	4.92	3.73	1.19(-)
NORTHEAST	Extremely Moist	5.19	5.05	0.14(-)
WEST CENTRAL	Near Normal	2.36	0.96	1.4(-)
CENTRAL	Very Moist Spell	3.64	3.76	0.12(+)
EAST CENTRAL	Extremely Moist	2.96	4.52	1.56(+)
SOUTHWEST	Near Normal	0.47	-0.62	1.09(-)
SOUTH CENTRAL	Very Moist Spell	1.89	3.28	1.39(+)
SOUTHEAST	Extremely Moist	2.87	4.45	1.58(+)

extreme drought	severe drought	moderate drought	near normal	unusual moist spell	very moist spell	extremely moist
-4.0 or less	-3.0 to -3.9	-2.0 to -2.9	-1.9 to +1.9	+2.0 to +2.9	+3.0 to +3.9	+4.0 and above

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 January 11, the West Central and Southwest regions were near normal but the rest of the state's climate regions were above normal.

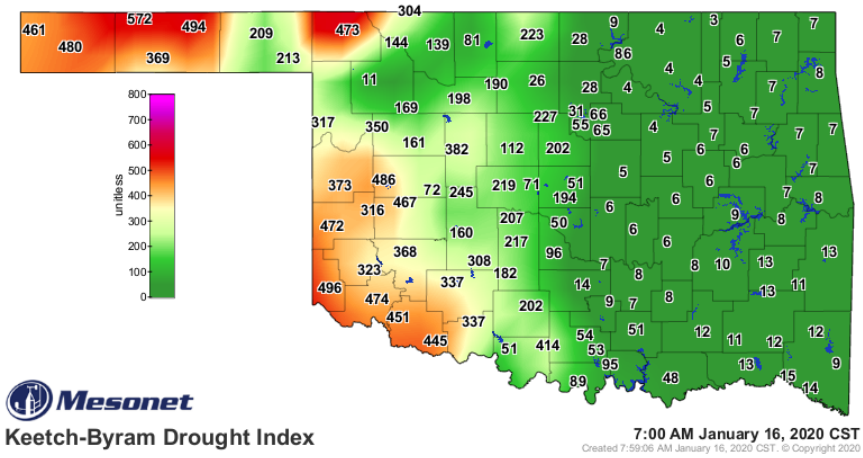
Standardized Precipitation Index (SPI)
Through December 2019

3-month	12-month	24-month
Near Normal	Abnormally Moist	Very Moist
Near Normal	Extremely Moist	Extremely Moist
Abnormally Moist	Exceptionally Moist	Extremely Moist
Near Normal	Very Moist	Very Moist
Near Normal	Extremely Moist	Extremely Moist
Moderately Moist	Very Moist	Extremely Moist
Abnormally Dry	Near Normal	Abnormally Moist
Near Normal	Moderately Moist	Extremely Moist
Abnormally Moist	Moderately Moist	Extremely Moist

exceptionally dry	extremely dry	severely dry	moderately dry	abnormally dry	near normal	abnormally moist	moderately moist	very moist	extremely moist	exceptionally moist
-2.00 and below	-1.99 to -1.60	-1.59 to -1.30	-1.29 to -0.80	-0.79 to -0.51	-0.50 to +0.50	+0.51 to +0.79	+0.80 to +1.29	+1.30 to +1.59	+1.60 to +1.99	+2.0 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. For all three time periods shown, all climate regions were near normal or wetter except the Southwest 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.

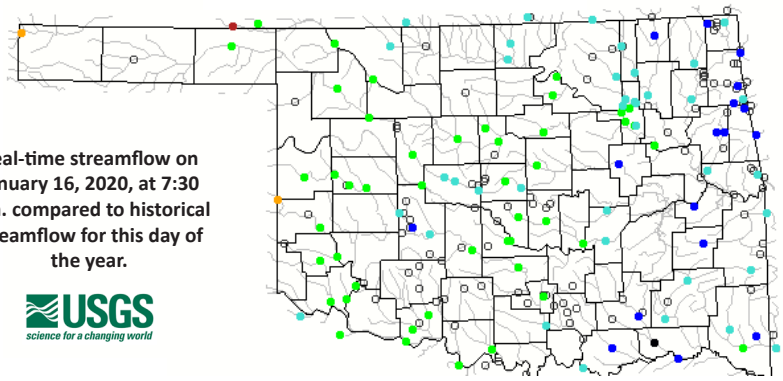
KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

Streamflow Conditions

January 16, 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.

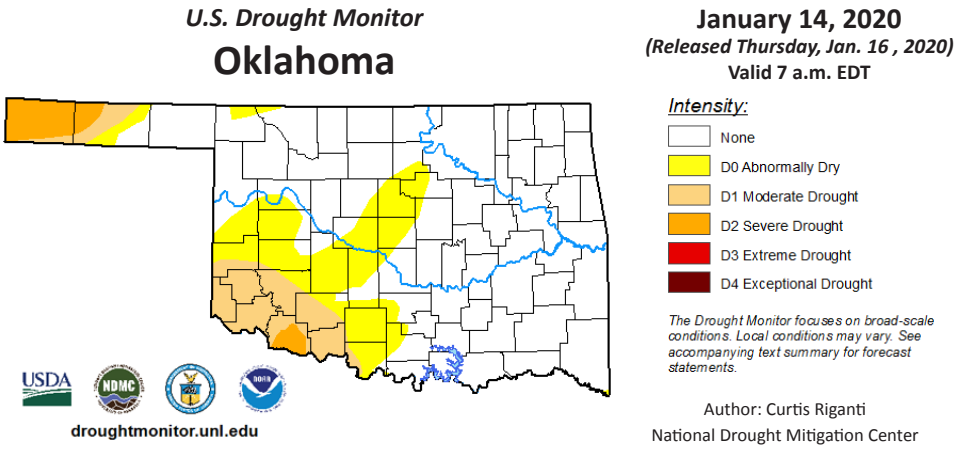


Real-time streamflow on January 16, 2020, at 7:30 a.m. compared to historical streamflow for this day of the year.

USGS science for a changing world

Weather/Drought Forecast

Drought Summary for Oklahoma



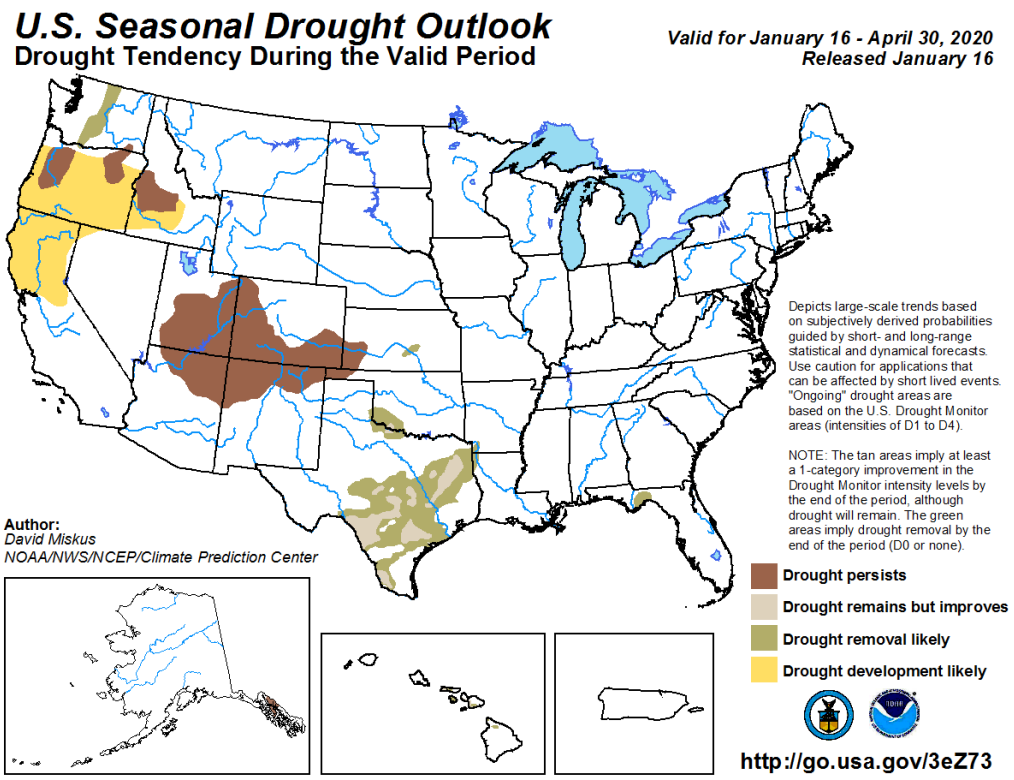
Author: Curtis Riganti
National Drought Mitigation Center

Drought Conditions (percent area)

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	1/14/2020	71.77	28.23	12.1	3.64	0	0	44
Last Week	1/7/2020	76.26	23.74	10.5	3.64	0	0	38
3 Months Ago	10/15/2019	70.51	29.49	8.7	1.09	0	0	39
Start of Calendar Year	12/31/2019	76.45	23.55	10.47	3.64	0	0	38
Start of Water Year	10/1/2019	71.94	28.06	11.08	1.01	0	0	40
One Year Ago	1/15/2019	100	0	0	0	0	0	0

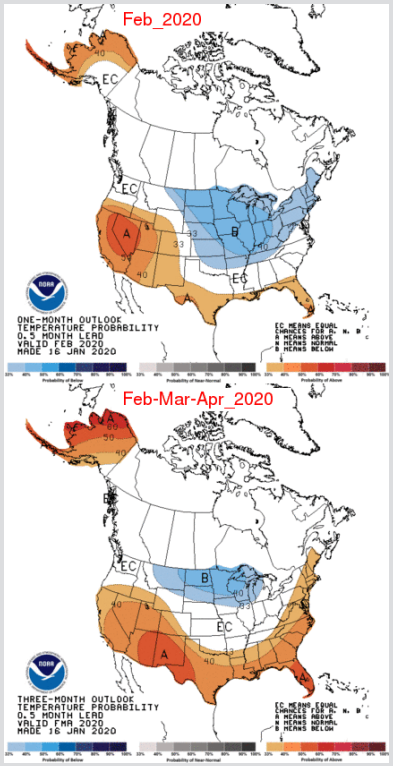
According to the latest U.S. Drought Monitor, as of January 14, 2020, the estimated Oklahoma population living in areas experiencing drought was 162,933. More than 12% of the state in area is experiencing Moderate Drought (D1) or worse with 3.64% experiencing Severe Drought (D2). Several areas (28.23% of the state) are having Abnormally Dry (D0) conditions.

Drought Probability

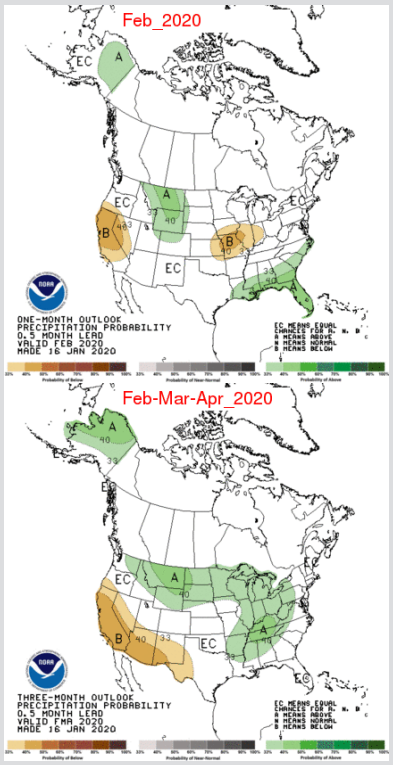


Seasonal Outlook

Temperature Probability



Precipitation Probability

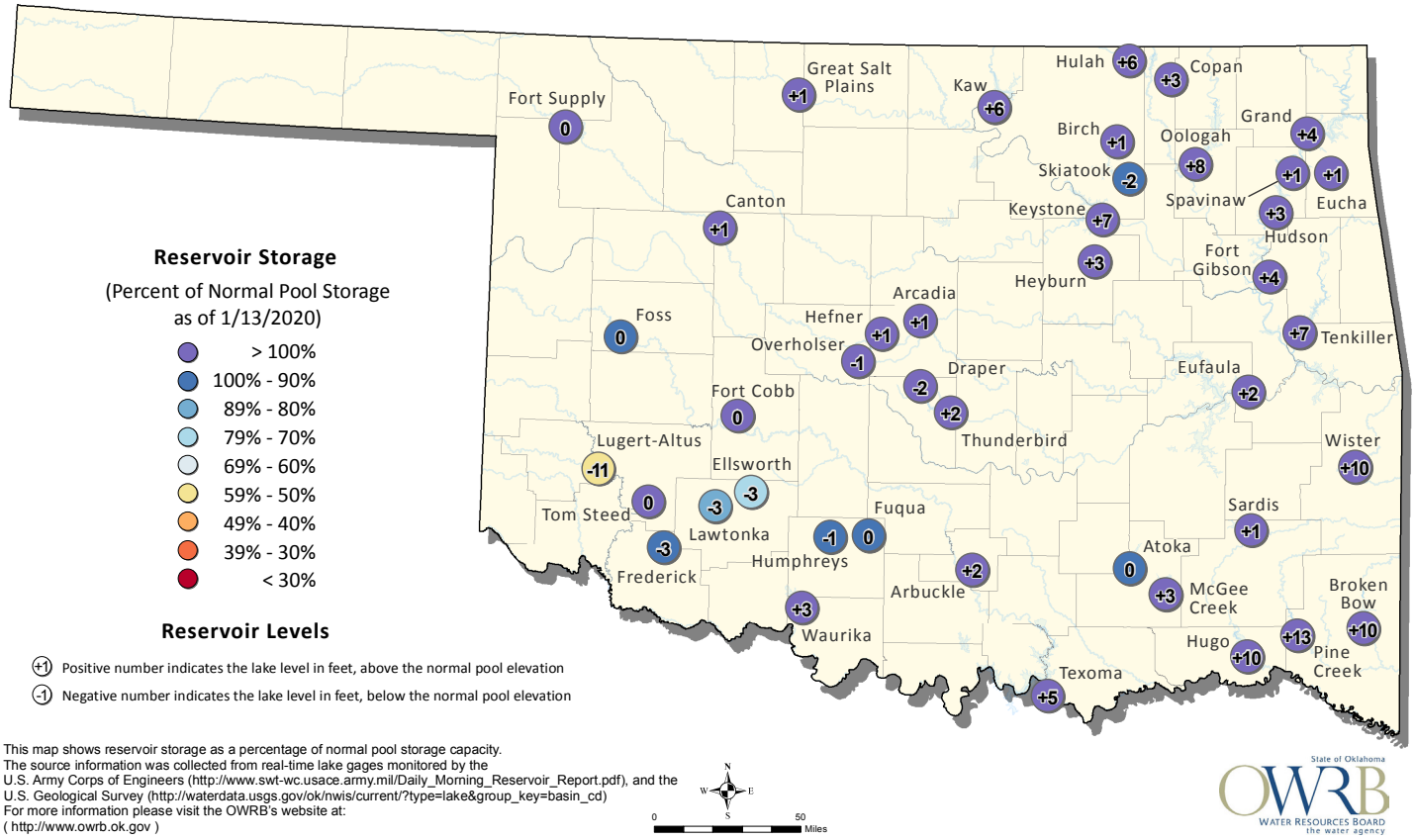


The contours on the maps above show the total probability of three categories. "Above" is indicated by the letter "A"; "Below" is indicated by the letter "B"; "EC" indicates "Equal Chances" for A or B.

Reservoir Storage

Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 1/13/2020



This map shows reservoir storage as a percentage of normal pool storage capacity.
The source information was collected from real-time lake gages monitored by the U.S. Army Corps of Engineers (http://www.swt-wc.usace.army.mil/Daily_Morning_Reservoir_Report.pdf), and the U.S. Geological Survey (http://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd)
For more information please visit the OWRB's website at:
(http://www.owrb.ok.gov)

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