Oklahoma Water Resources Bulletin
& Summary of Current Conditions

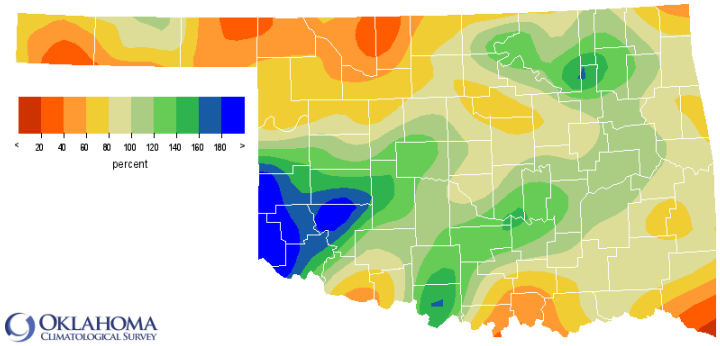
OWRB the water agency

February 18, 2017

Precipitation

Statewide Precipitation

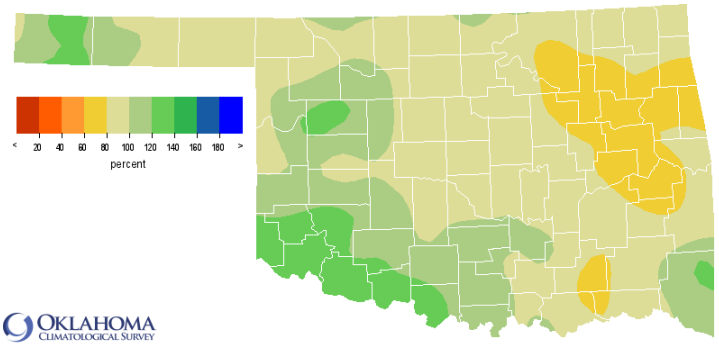
Climate Division	Last 30 Days (January 19, 2017 – February 17, 2017) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days (February 19, 2016 – February 17, 2017) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
PANHANDLE	0.38"	-0.27"	58%	44th driest	20.47"	-0.09"	100%	44th wettest
NORTH CENTRAL	0.77"	-0.36"	68%	49th wettest	29.84"	-1.53"	95%	44th wettest
NORTHEAST	2.05"	+0.18"	110%	33rd wettest	35.92"	-6.67"	84%	28th driest
WEST CENTRAL	1.30"	+0.25"	124%	24th wettest	31.36"	+3.00"	111%	16th wettest
CENTRAL	1.62"	-0.06"	96%	33rd wettest	32.99"	-4.57"	88%	40th driest
EAST CENTRAL	2.44"	-0.02"	99%	35th wettest	36.77"	-9.28"	80%	24th driest
SOUTHWEST	1.80"	+0.47"	136%	26th wettest	37.11"	+6.89"	123%	12th wettest
SOUTH CENTRAL	2.19"	+0.01"	100%	35th wettest	41.31"	+0.69"	102%	30th wettest
SOUTHEAST	2.47"	-0.83"	75%	43rd driest	48.21"	-2.25"	96%	43rd driest
STATEWIDE	1.65"	-0.07"	96%	41st wettest	34.60"	-1.80"	95%	48th wettest



Oklahoma Climatological Survey

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Jan 19, 2017 through Feb 17, 2017



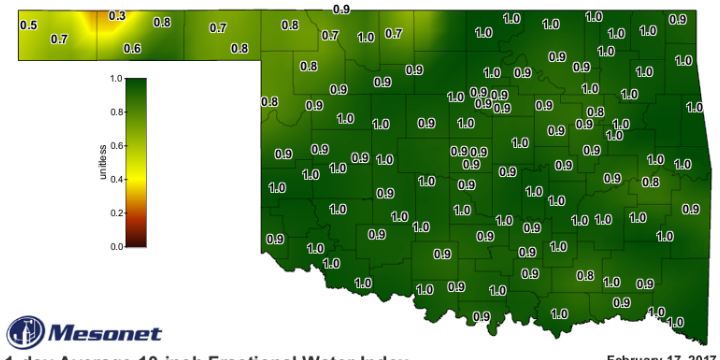
Oklahoma Climatological Survey

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Feb 19, 2016 through Feb 17, 2017

Soil Moisture

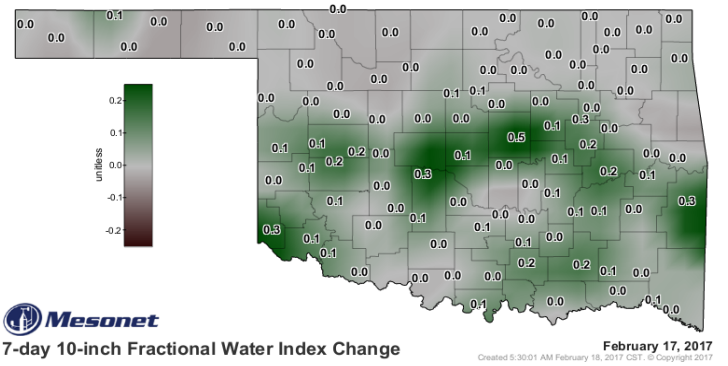
Fractional Water Index
February 17, 2017



Mesonet

1-day Average 10-inch Fractional Water Index

February 17, 2017



Mesonet

7-day 10-inch Fractional Water Index Change

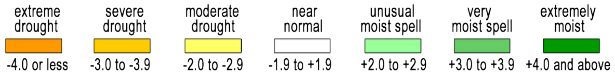
February 17, 2017

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)

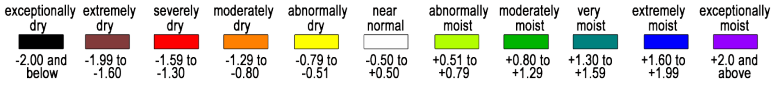
Climate Division	Status 2/11/17	Value 1/28	Value 2/11	Change in Value
NORTHWEST	Near Normal	0.97	0.09	0.88
NORTH CENTRAL	Near Normal	0.92	0.16	0.76
NORTHEAST	Near Normal	-0.27	-0.92	0.65
WEST CENTRAL	Near Normal	0.68	-0.5	1.18
CENTRAL	Unusual Moist Spell	-1.34	-2.06	0.72
EAST CENTRAL	Unusual Moist Spell	-2.27	-2.73	0.46
SOUTHWEST	Near Normal	1.11	0.34	0.77
SOUTH CENTRAL	Unusual Moist Spell	-1.09	-1.92	0.83
SOUTHEAST	Unusual Moist Spell	-1.77	-2.21	0.44



The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland. According to the latest PDSI, all climate regions in the state are classified as Near Normal except the Central, East Central, South Central, and Southeast, which are having an Unusual Moist Spell.

Standardized Precipitation Index (SPI)
Through January 2017

Climate Division	3-month	12-month	24-month
NORTHWEST	Moderately Moist	Near Normal	Extremely Moist
NORTH CENTRAL	Near Normal	Near Normal	Moderately Moist
NORTHEAST	Near Normal	Near Normal	Moderately Moist
WEST CENTRAL	Abnormally Moist	Abnormally Moist	Extremely Moist
CENTRAL	Near Normal	Near Normal	Very Moist
EAST CENTRAL	Severely Dry	Abnormally Dry	Extremely Moist
SOUTHWEST	Near Normal	Moderately Moist	Exceptionally Moist
SOUTH CENTRAL	Near Normal	Near Normal	Exceptionally Moist
SOUTHEAST	Abnormally Dry	Near Normal	Extremely 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. The East Central climate division had Severely Dry and Abnormally Dry conditions for the 3- and 12-month periods, and the Southeast division was Abnormally Dry for the 3-month period, but all climate divisions had Moderately Moist conditions or wetter for the 24-month period.

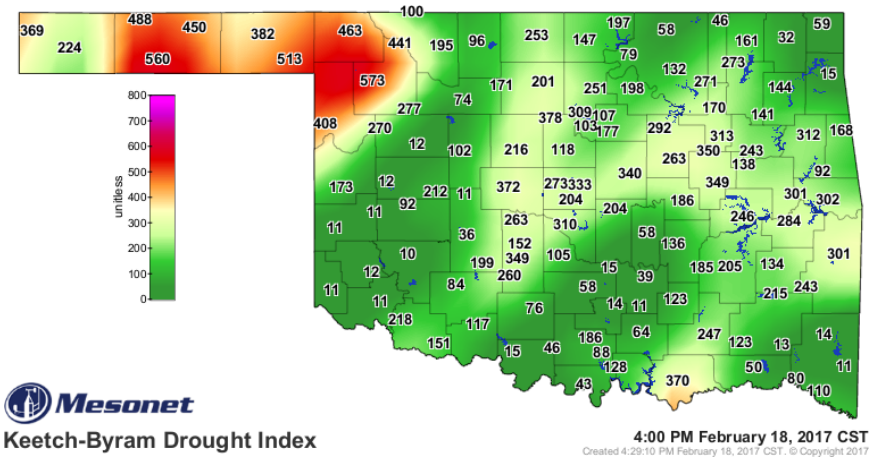
Keetch-Byram Drought Fire Index

February 18, 2017, 4:00 p.m..--0 stations are above 600.

January 31, 2017, 8:00 a.m.--0 stations are above 600.

Two stations were above 600 on December 31, 2016.

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.

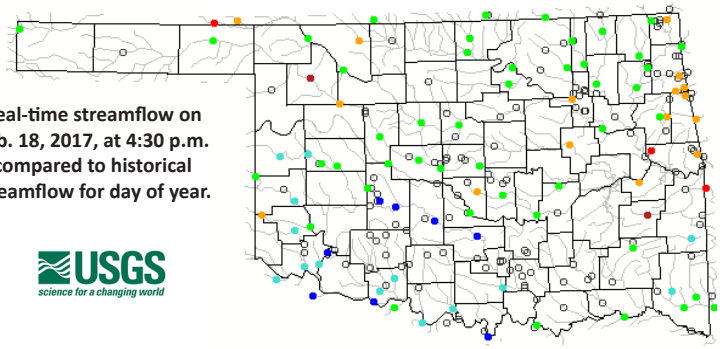


Streamflow Conditions

February 18, 2017

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 real-time streamflow information.



Real-time streamflow on Feb. 18, 2017, at 4:30 p.m. compared to historical streamflow for day of year.

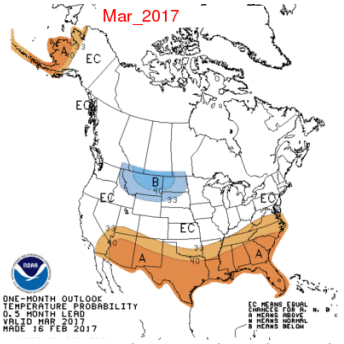
USGS science for a changing world

Weather/Drought Forecast

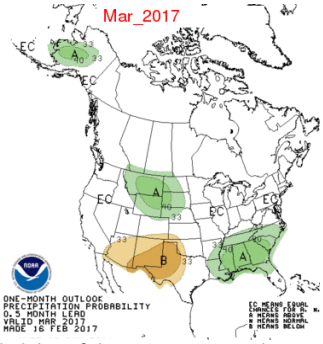
Seasonal Outlook

March

Temperature

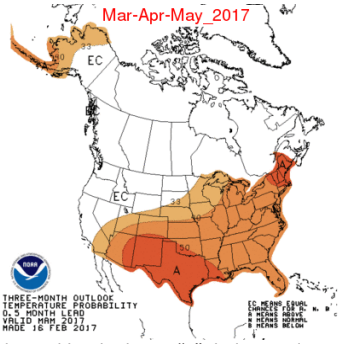


Precipitation

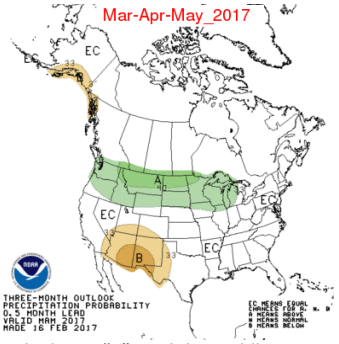


March - April - May

Temperature



Precipitation

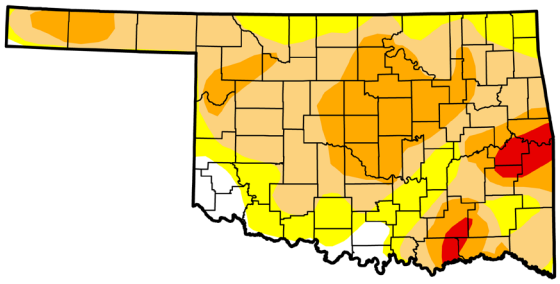


The contours on the maps show the total probability of three categories—above, indicated by the letter "A"; below, indicated by the letter "B"; and the middle category, indicated by the letter "N". "EC" stands for "Equal Chances" for A, N, or B

Drought Summary & Outlook

U.S. Drought Monitor

Oklahoma



February 14, 2017

(Released Thursday, Feb. 16, 2017)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.15	94.85	73.84	30.14	3.34	0.00
Last Week 2/7/2017	4.43	95.57	79.46	31.10	4.03	0.00
3 Months Ago 11/15/2016	38.94	61.06	43.98	14.57	0.65	0.00
Start of Calendar Year 1/3/2017	5.61	94.39	83.21	55.75	5.55	0.00
Start of Water Year 9/27/2016	57.82	42.18	19.04	3.05	0.00	0.00
One Year Ago 2/16/2016	97.00	3.00	0.00	0.00	0.00	0.00

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.

Author:
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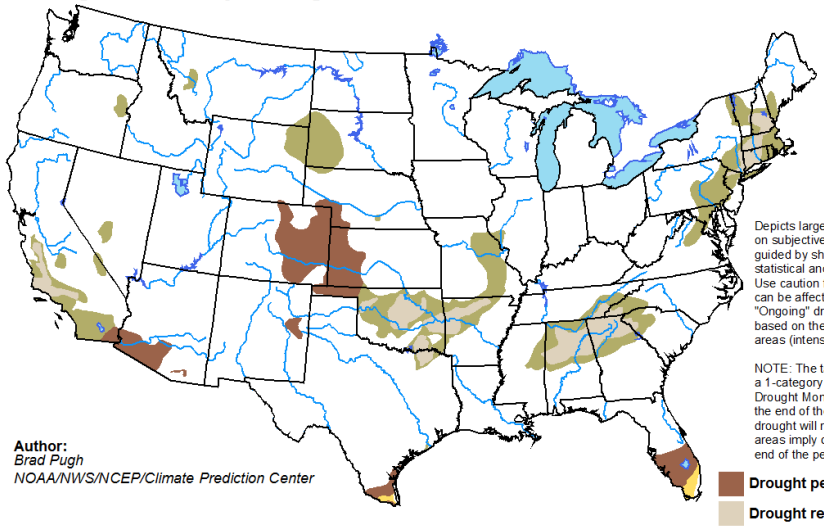
NCEI/NOAA

http://droughtmonitor.unl.edu/

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for February 16 - May 31, 2017
Released February 16, 2017



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:
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NOAA/NWS/NCEP/Climate Prediction Center

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

According to the latest *U.S. Drought Monitor*, the number of Oklahomans currently affected by drought is 3,327,366, down by about 100,000 in the last few weeks, with 73.8% of the state (in area) in Moderate Drought (D1) or worse. About 30% of the state is in Severe Drought (D2) or worse, and 3.3% is in Extreme Drought (D3) or worse. These small areas in D3 are found in the southeastern part of the state.

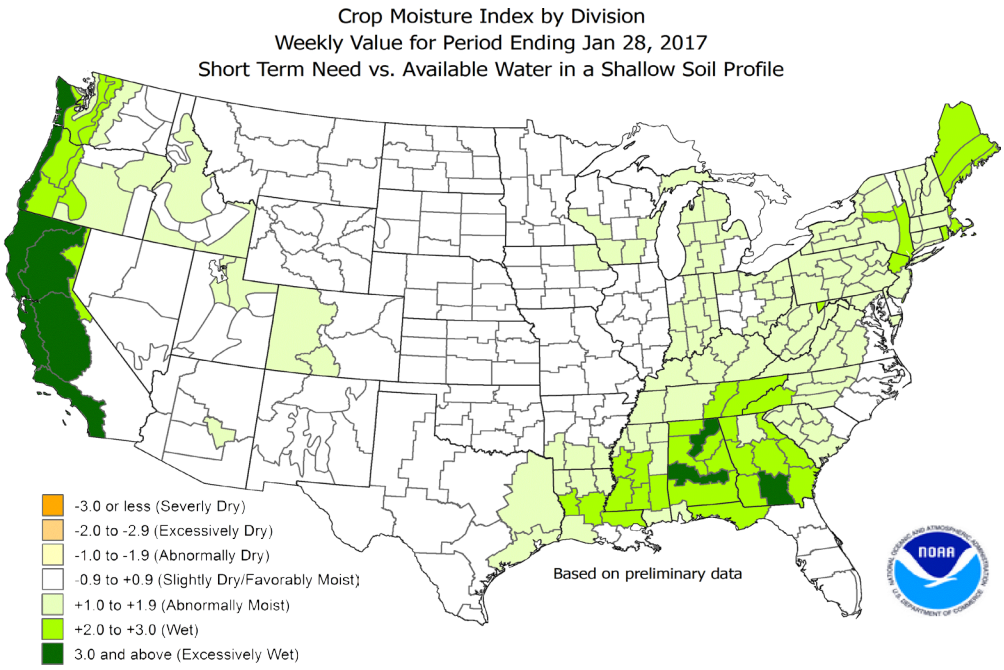
According to the seasonal drought outlook, from mid February through the end of May, drought conditions are likely to persist in the Panhandle, but expected to improve in the rest of the state.

Drought is also likely to persist and develop in a few other areas across the nation, but overall, conditions will likely improve in most areas that were experiencing drought conditions during the last few months.

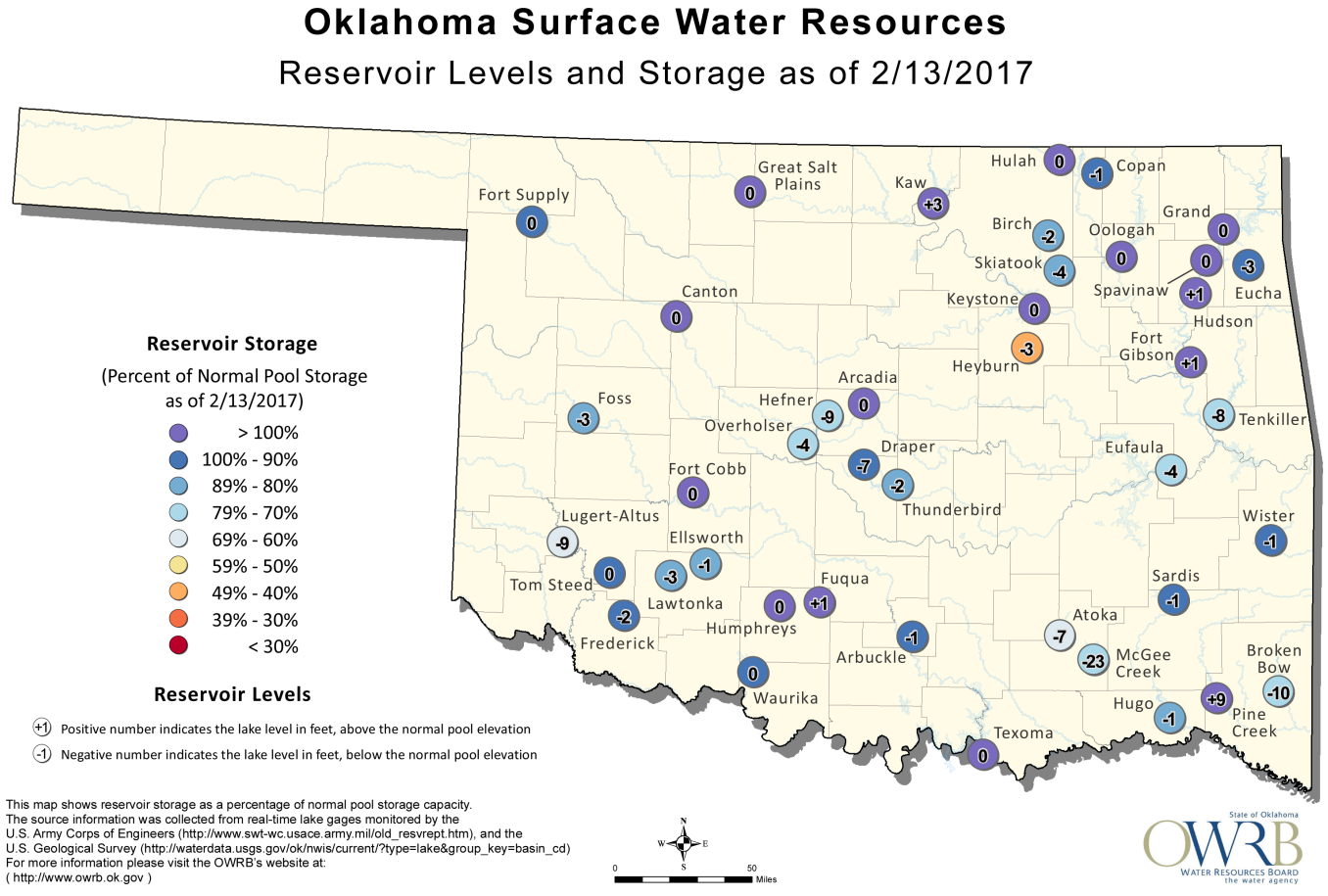
Crop Moisture Index

According to the NOAA Crop Moisture Index by Division, for the period ending January 28, 2017, all regions of the state are Slightly Dry/ Favorably Moist (-0.9 to +0.9).

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



The Oklahoma Water Resources Bulletin is compiled and distributed monthly by the Oklahoma Water Resources Board utilizing products and information developed by the Oklahoma Climatological Survey, Oklahoma Mesonet, National Oceanic and Atmospheric Administration, National Drought Mitigation Center, US Geological Survey, US Army Corps of Engineers, and US Department of Agriculture. For questions or comments contact Darla Whitley, Editor.