

Oklahoma Water Resources Bulletin & Summary of Current Conditions

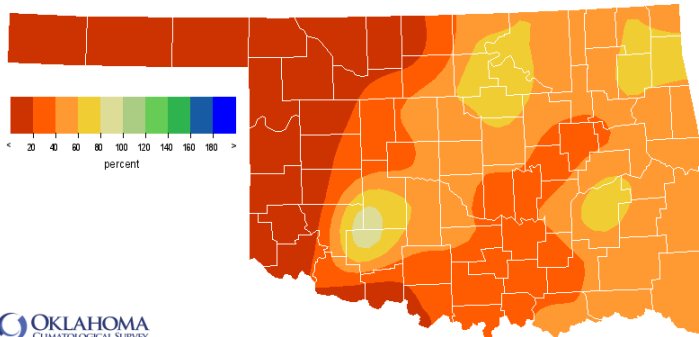


November 17, 2017

PRECIPITATION

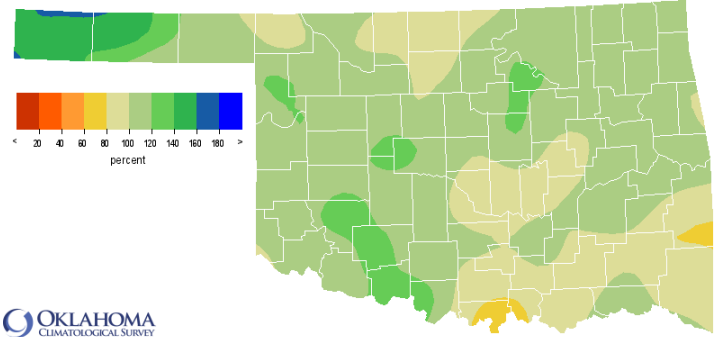
Statewide Precipitation

Climate Division	Last 30 Days October 18, 2017 – November 16, 2017				Last 365 Days November 17, 2016 – November 16, 2017			
	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	0.03"	-1.20"	2%	5th driest	25.64"	+5.06"	125%	9th wettest
NORTH CENTRAL	0.56"	-1.71"	25%	16th driest	32.39"	+0.97"	103%	35th wettest
NORTHEAST	1.93"	-1.45"	57%	32nd driest	47.50"	+4.83"	111%	18th wettest
WEST CENTRAL	0.36"	-1.74"	17%	16th driest	32.46"	+4.06"	114%	15th wettest
CENTRAL	1.56"	-1.56"	50%	31st driest	40.08"	+2.45"	107%	22nd wettest
EAST CENTRAL	2.06"	-2.14"	49%	35th driest	49.46"	+3.32"	107%	19th wettest
SOUTHWEST	0.97"	-1.54"	39%	31st driest	35.79"	+5.52"	118%	14th wettest
SOUTH CENTRAL	1.18"	-2.55"	32%	17th driest	38.74"	-1.97"	95%	42nd wettest
SOUTHEAST	2.42"	-2.60"	48%	30th driest	49.08"	-1.51"	97%	48th wettest
STATEWIDE	1.23"	-1.82"	40%	21st driest	38.97"	+2.50"	107%	22nd wettest



OKLAHOMA
CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Oct 18, 2017 through Nov 16, 2017
Created 2017-11-17 10:03:10 UT-C. Copyright © 2017

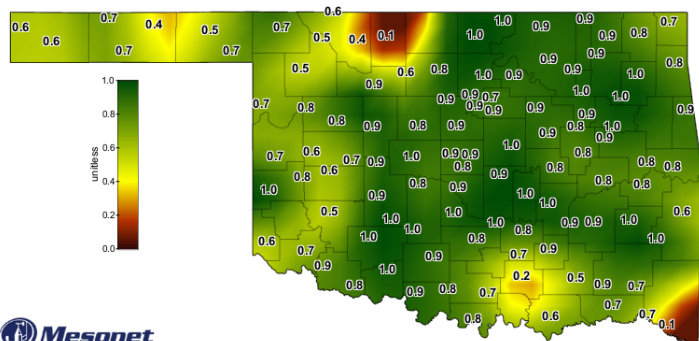


OKLAHOMA
CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Nov 17, 2016 through Nov 16, 2017
Created 2017-11-17 10:03:10 UT-C. Copyright © 2017

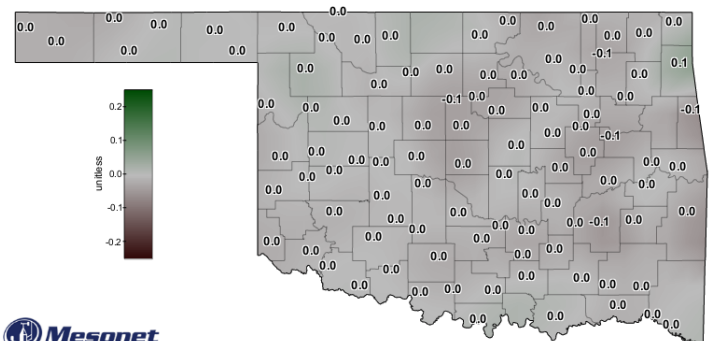
SOIL MOISTURE

Fractional Water Index November 16, 2017



Mesonet
1-day Average 10-inch Fractional Water Index

November 16, 2017
Created 6:30:14 AM November 17, 2017 CST. © Copyright 2017



Mesonet
7-day 10-inch Fractional Water Index Change

November 16, 2017
Created 5:30:02 AM November 17, 2017 CST. © Copyright 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)					Standardized Precipitation Index (SPI) Through October 2017		
Climate Division	Status 11/11/17	Value 9/30	Value 11/11	Change in Value	3-month	12-month	24-month
NORTHWEST	Unusual Moist Spell	2.86	2.21	0.65(-)	Moderately Moist	Moderately Moist	Moderately Moist
NORTH CENTRAL	Near Normal	1.01	0.89	0.12(-)	Moderately Moist	Abnormally Moist	Moderately Moist
NORTHEAST	Near Normal	0.29	0.86	0.57(+)	Moderately Moist	Moderately Moist	Moderately Moist
WEST CENTRAL	Near Normal	1.9	1.55	0.35(-)	Very Moist	Moderately Moist	Very Moist
CENTRAL	Near Normal	1.48	1.26	0.22(-)	Very Moist	Moderately Moist	Moderately Moist
EAST CENTRAL	Near Normal	1.85	1.62	0.23(-)	Abnormally Moist	Abnormally Moist	Moderately Moist
SOUTHWEST	Very Moist Spell	3.37	3.11	0.26(-)	Extremely Moist	Very Moist	Exceptionally Moist
SOUTH CENTRAL	Near Normal	1.72	0.54	1.18(-)	Near Normal	Near Normal	Moderately Moist
SOUTHEAST	Near Normal	0.47	0.19	0.28(-)	Near Normal	Near Normal	Moderately 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, all climate regions in the state are experiencing near normal conditions except the Northwest, which is having an unusual moist spell, and the Southwest, which is having a very moist spell.

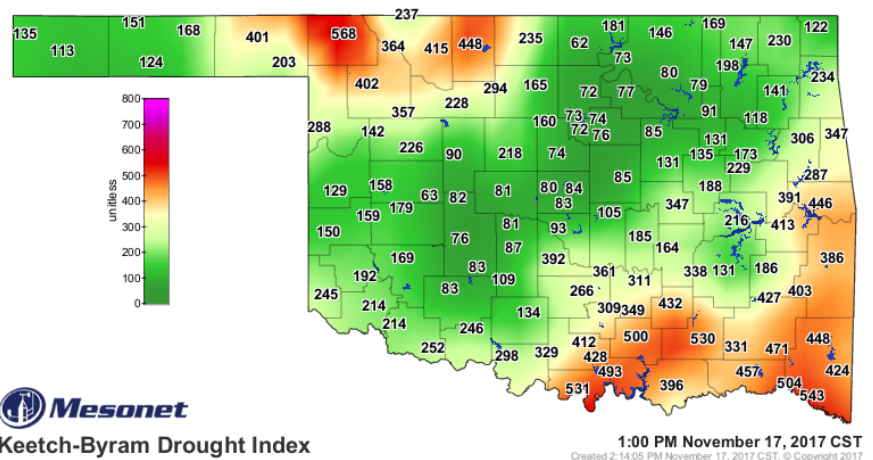
exceptionally dry -2.00 and below	extremely dry -1.99 to -1.60	severely dry -1.59 to -1.30	moderately dry -1.29 to -0.80	abnormally dry -0.79 to -0.51	near normal -0.50 to +0.50	abnormally moist +0.51 to +0.79	moderately moist +0.80 to +1.29	very moist +1.30 to +1.59	extremely moist +1.60 to +1.99	exceptionally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

Keetch-Byram Drought Fire Index

November 17, 1:00 p.m.--0 stations are above 600.

Zero stations were above 600 on October 9, 2017.



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

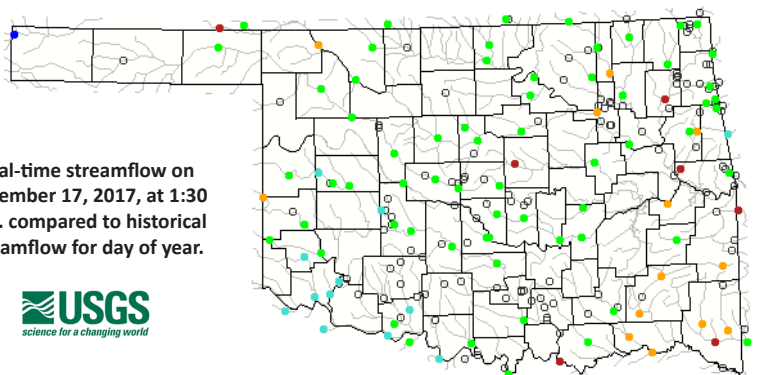
STREAMFLOW CONDITIONS

November 17, 2017

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

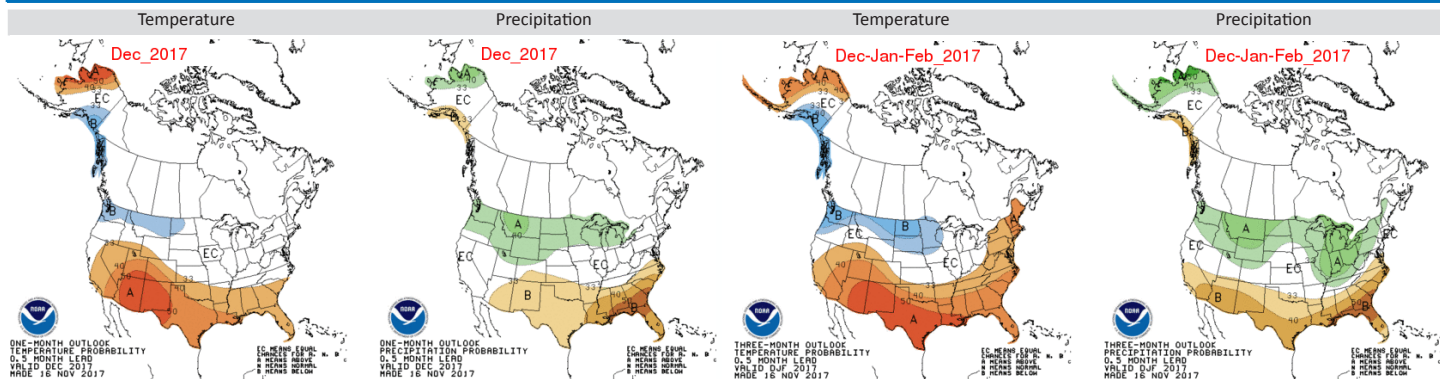
Visit waterwatch.usgs.gov for real-time streamflow information.

Real-time streamflow on November 17, 2017, at 1:30 p.m. compared to historical streamflow for day of year.



WEATHER/DROUGHT FORECAST

Seasonal Outlook

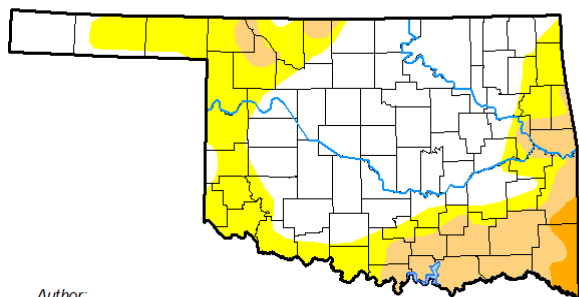


The contours on the maps show the total probability of three categories—above, indicated by the letter "A"; and below, indicated by the letter "B". "EC" indicates "Equal Chances" for A or B.

Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

November 14, 2017
(Released Thursday, Nov. 16, 2017)
Valid 7 a.m. EST



Author:
Richard Tinker
CPC/NOAA/NWS/NCEP



<http://droughtmonitor.unl.edu/>

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	54.09	45.91	17.34	2.00	0.00	0.00
Last Week 11-07-2017	70.25	29.75	8.15	0.08	0.00	0.00
3 Months Ago 08-15-2017	86.05	13.95	0.00	0.00	0.00	0.00
Start of Calendar Year 01-03-2017	5.61	94.39	83.21	55.75	5.55	0.00
Start of Water Year 09-26-2017	64.46	35.54	0.77	0.00	0.00	0.00
One Year Ago 11-15-2016	38.94	61.06	43.98	14.57	0.65	0.00

Intensity

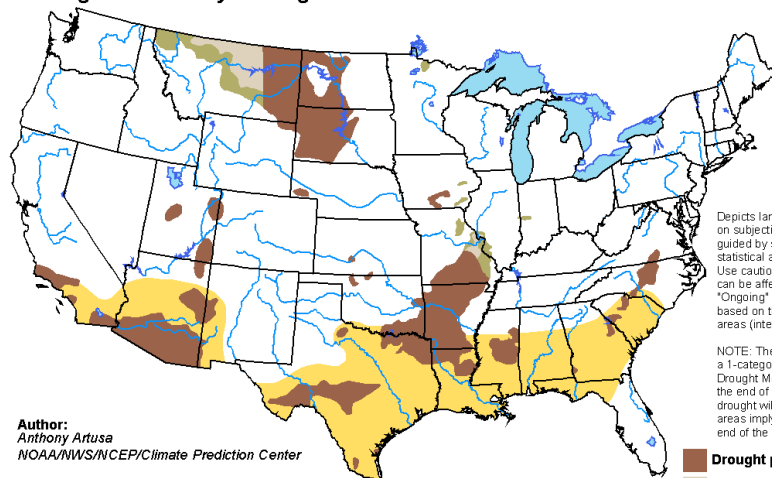
Yellow D0 Abnormally Dry Red D3 Extreme Drought
Orange D1 Moderate Drought Dark Red D4 Exceptional Drought
Brown D2 Severe Drought

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 November 14, almost 46% of the state is experiencing abnormally dry conditions (D0) or worse, up by a few percentage points from this time last month. While 17.34% of the state (in area) is experiencing moderate drought (D1) or worse, mostly in southeastern parts of the state, 2% of this area is in severe drought (D2). No areas are suffering from exceptional or extreme drought (D4-D3).

According to the latest seasonal drought outlook for the period of November 16, 2017, through February 28, 2018, a large portion of southeastern Oklahoma will remain in persistent drought. This area of drought stretches into most of Arkansas, southern Missouri, northeastern Texas, and northern Louisiana. Other large areas of persistent drought include southern Arizona and eastern Montana spreading into the western halves of North and South Dakota.

U.S. Seasonal Drought Outlook Valid for November 16 - February 28, 2018 Drought Tendency During the Valid Period Released November 16, 2017



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

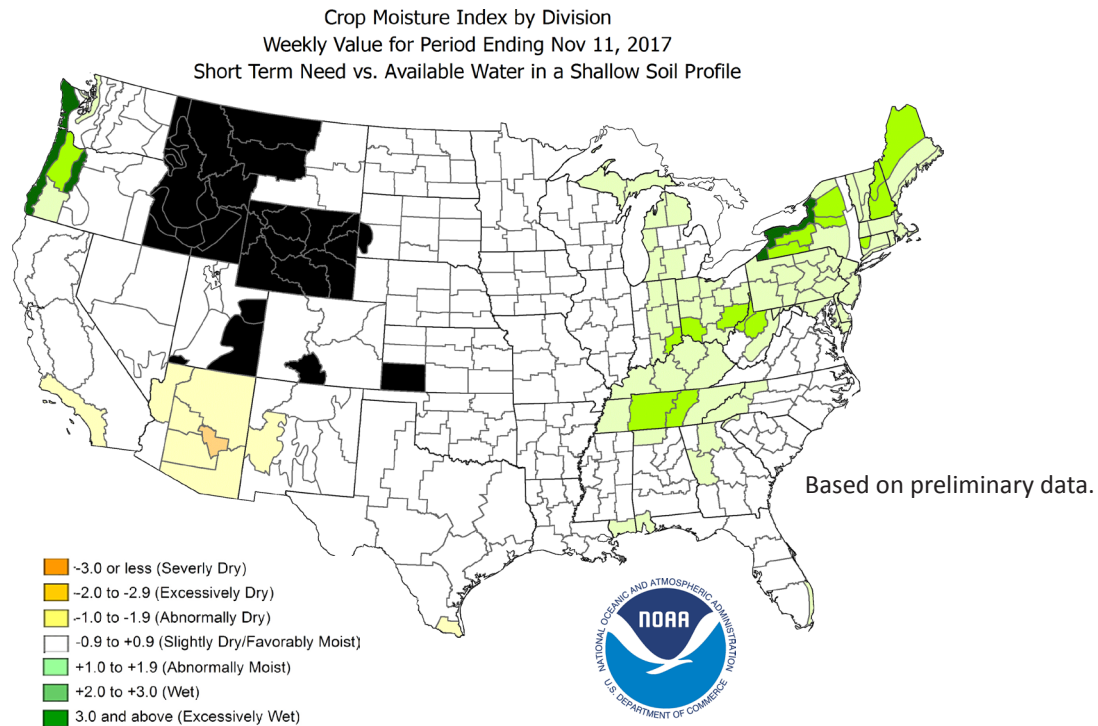


<http://go.usa.gov/3eZ73>

CROP MOISTURE INDEX

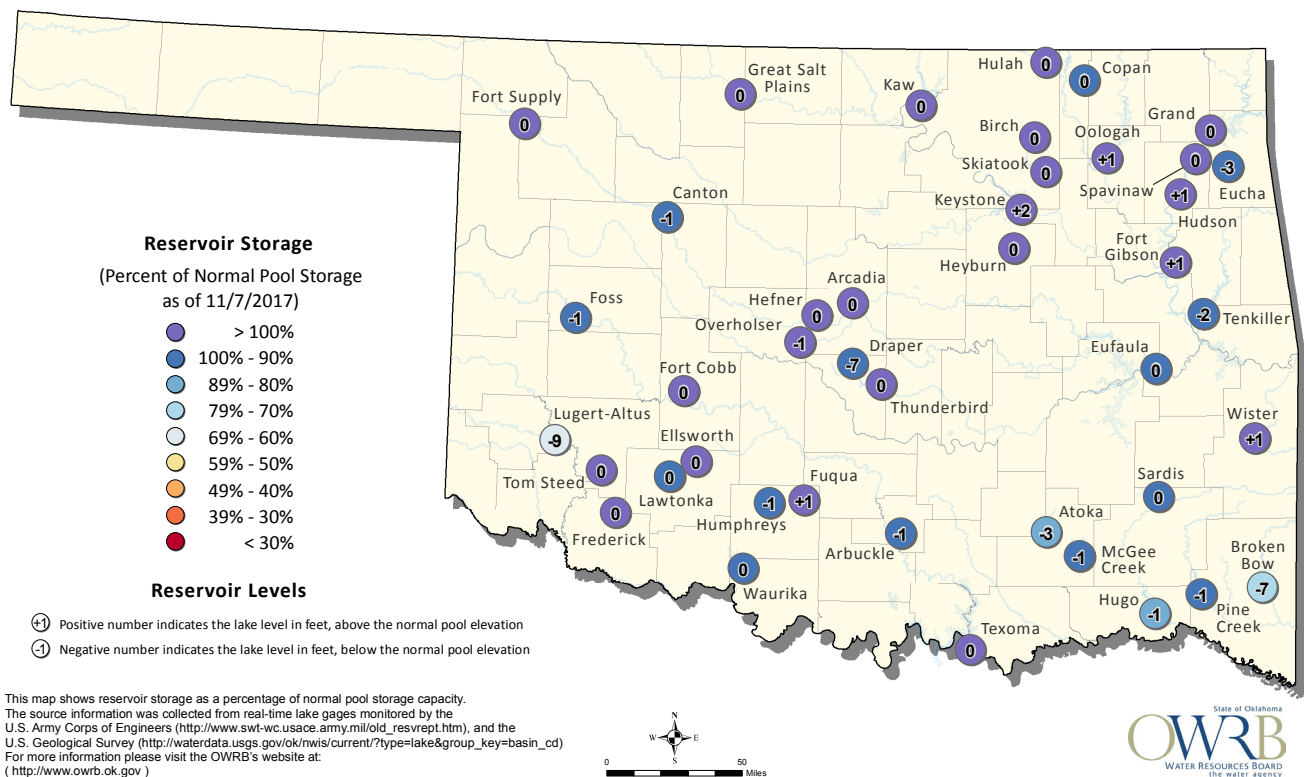
According to the NOAA Crop Moisture Index by Division, for the period ending November 11, 2017, all Oklahoma climate regions are experiencing Slightly Dry/Favorably Moist conditions (-0.9 to +0.9).

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

Oklahoma Surface Water Resources Reservoir Levels and Storage as of 11/7/2017



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.