

Oklahoma Water Resources Bulletin & Summary of Current Conditions

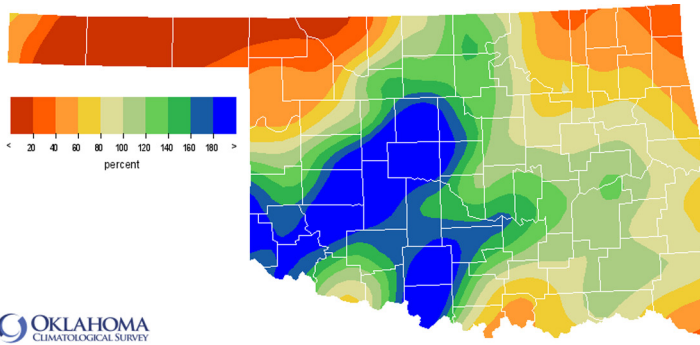


February 28, 2017

PRECIPITATION

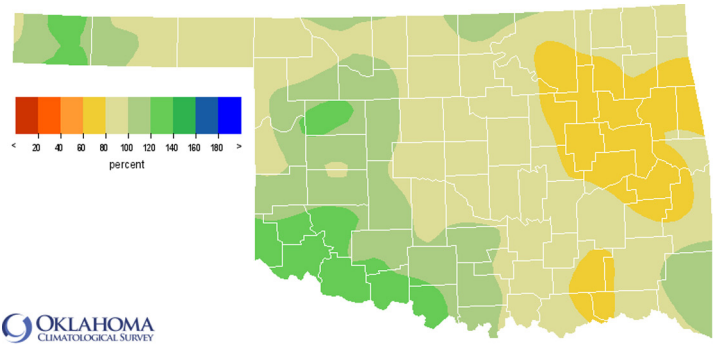
Statewide Precipitation

| Climate Division | Last 30 Days January 29, 2017 – February 27, 2017 | | | | Last 365 Days February 29, 2016 – February 27, 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 | 0.15" | -0.53" | 23% | 16th driest | 20.44" | -0.11" | 99% | 43rd wettest |
| NORTH CENTRAL | 1.20" | -0.09" | 93% | 39th wettest | 30.58" | -0.78" | 98% | 43rd wettest |
| NORTHEAST | 1.31" | -0.80" | 62% | 35th driest | 35.97" | -6.61" | 84% | 29th driest |
| WEST CENTRAL | 1.64" | +0.46" | 139% | 22nd wettest | 31.70" | +3.35" | 112% | 17th wettest |
| CENTRAL | 2.74" | +0.85" | 145% | 20th wettest | 33.48" | -4.08" | 89% | 39th driest |
| EAST CENTRAL | 2.55" | -0.14" | 95% | 37th wettest | 36.13" | -9.91" | 78% | 21st driest |
| SOUTHWEST | 2.58" | +1.11" | 176% | 14th wettest | 37.21" | +7.00" | 123% | 12th wettest |
| SOUTH CENTRAL | 3.02" | +0.59" | 124% | 27th wettest | 40.52" | -0.09" | 100% | 37th wettest |
| SOUTHEAST | 3.17" | -0.38" | 89% | 45th wettest | 46.87" | -3.59" | 93% | 40th driest |
| STATEWIDE | 2.03" | +0.13" | 107% | 33rd wettest | 34.51" | -1.88" | 95% | 48th wettest |



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

Jan 29, 2017 through Feb 27, 2017
Created 2017-02-28 10:02:58 UTC. Copyright © 2017

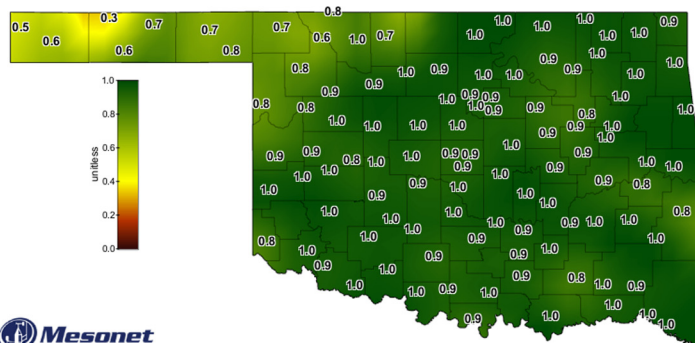


OKLAHOMA CLIMATOLOGICAL SURVEY
Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Feb 29, 2016 through Feb 27, 2017
Created 2017-02-28 10:02:58 UTC. Copyright © 2017

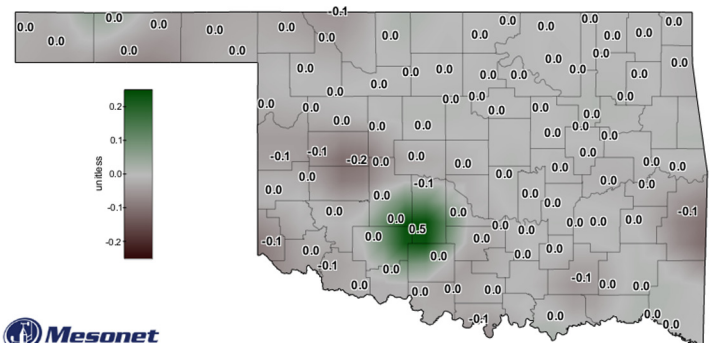
SOIL MOISTURE

Fractional Water Index February 27, 2017



Mesonet
1-day Average 10-inch Fractional Water Index

February 27, 2017
Created 6:30:14 AM February 28, 2017 CST. © Copyright 2017



Mesonet
7-day 10-inch Fractional Water Index Change

February 27, 2017
Created 5:30:01 AM February 28, 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 January 2017 | | |
|--------------------------------------|---------------------|--------------------|--------------------|--|--|------------------|---------------------|
| Climate Division | Status 2/25/17 | Value 1/28 2/25 | Change in Value | | 3-month | 12-month | 24-month |
| NORTHWEST | Near Normal | 0.97 -0.54 | 1.51 | | Moderately Moist | Near Normal | Extremely Moist |
| NORTH CENTRAL | Near Normal | 0.92 1.04 | -0.12 | | Near Normal | Near Normal | Moderately Moist |
| NORTHEAST | Near Normal | -0.27 -0.68 | 0.41 | | Near Normal | Near Normal | Moderately Moist |
| WEST CENTRAL | Near Normal | 0.68 0.86 | -0.18 | | Abnormally Moist | Abnormally Moist | Extremely Moist |
| CENTRAL | Near Normal | -1.34 -0.37 | -0.97 | | Near Normal | Near Normal | Very Moist |
| EAST CENTRAL | Near Normal | -2.27 -1.66 | -0.61 | | Severely Dry | Abnormally Dry | Extremely Moist |
| SOUTHWEST | Unusual Moist Spell | 1.11 2.32 | -1.21 | | Near Normal | Moderately Moist | Exceptionally Moist |
| SOUTH CENTRAL | Near Normal | -1.09 -0.21 | -0.88 | | Near Normal | Near Normal | Exceptionally Moist |
| SOUTHEAST | Near Normal | -1.77 -1.31 | -0.46 | | Abnormally Dry | Near Normal | Extremely 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 |
|---------------------------------|--------------------------------|----------------------------------|-----------------------------|-------------------------------------|----------------------------------|-----------------------------------|

| | | | | | | | | | | |
|--------------------------------------|---------------------------------|--------------------------------|----------------------------------|----------------------------------|-------------------------------|------------------------------------|------------------------------------|------------------------------|-----------------------------------|---------------------------------------|
| 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 |
|--------------------------------------|---------------------------------|--------------------------------|----------------------------------|----------------------------------|-------------------------------|------------------------------------|------------------------------------|------------------------------|-----------------------------------|---------------------------------------|

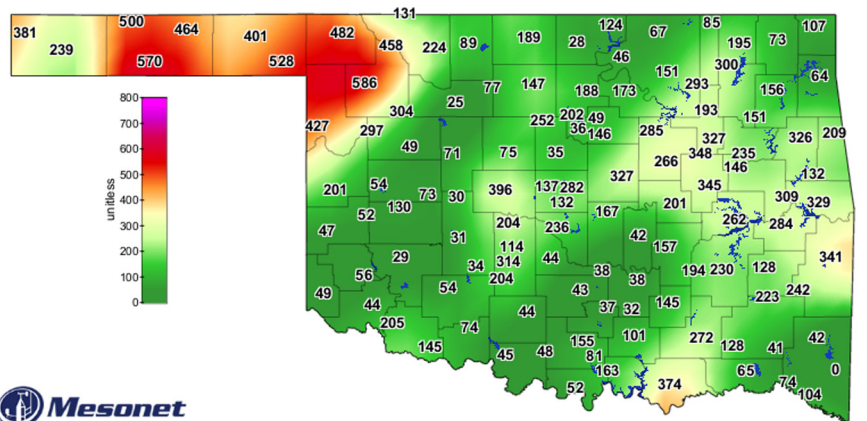
The PDSI is based upon precipitation, temperature, and soil moisture, and is considered most effective for unirrigated cropland. According to the latest PDSI, all climate regions in the state are classified as Near Normal except the Southwest region, which is experiencing an Unusual Moist Spell.

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 conditions for the 3-month period and was Abnormally Dry for the 12-month period. The Southeast division was Abnormally Dry for the 3-month period. However, all climate divisions had Moderately Moist conditions or wetter for the 24-month period.

Keetch-Byram Drought Fire Index

February 28, 1:00 p.m.--0 stations are above 600.

Zero stations were above 600 on January 31, 2017.



Keetch-Byram Drought Index

1:00 PM February 28, 2017 CST
Created 1:44:04 PM February 28, 2017 CS1. © Copyright 2017

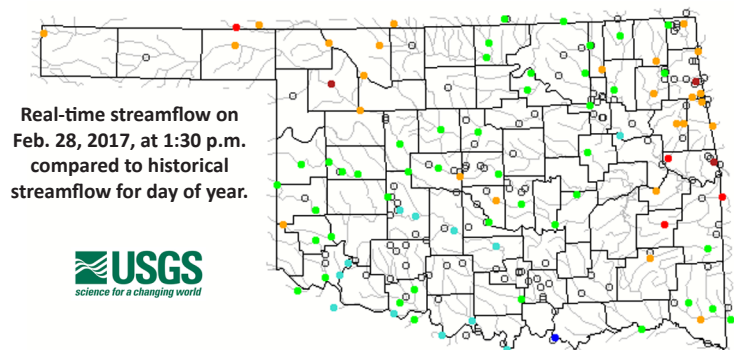
The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

STREAMFLOW CONDITIONS

February 28, 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.

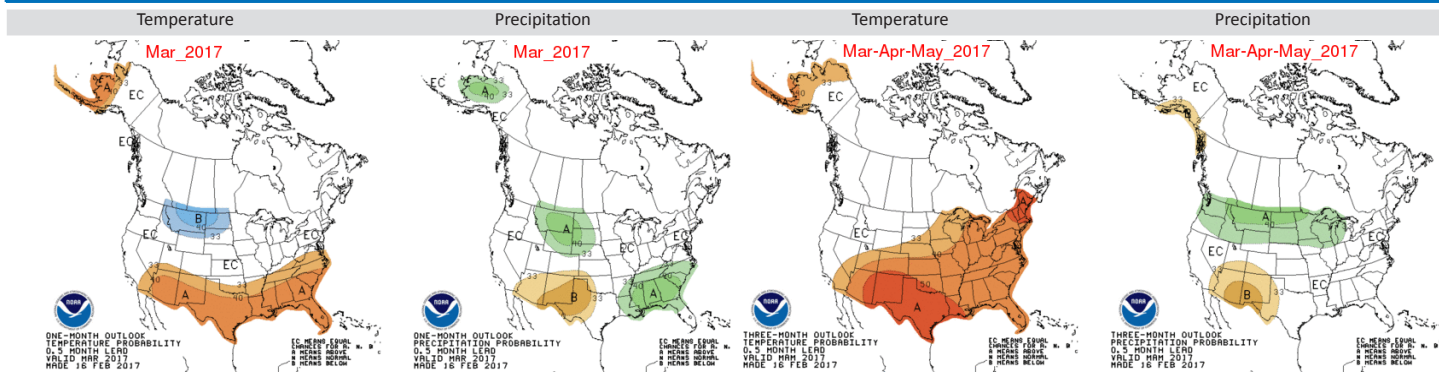


Real-time streamflow on Feb. 28, 2017, at 1:30 p.m. compared to historical streamflow for day of year.



WEATHER/DROUGHT FORECAST

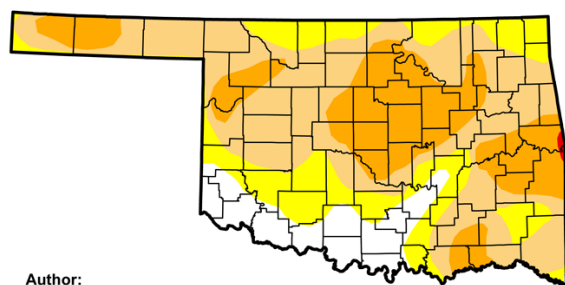
Seasonal Outlook



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. For March, the probability for precipitation in the Panhandle, West Central, and Southwest regions is shown as below normal for precipitation. For the March-May period, the entire state is shown as having equal chances for above to below normal precipitation.

Drought Summary & Outlook

U.S. Drought Monitor Oklahoma



Author:
Richard Heim
NCEI/NOAA



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

February 21, 2017
(Released Thursday, Feb. 23, 2017)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|------------------------------------|-------|-------|-------|-------|-------|------|
| Current | 11.49 | 88.51 | 67.93 | 26.61 | 0.18 | 0.00 |
| Last Week 2/14/2017 | 5.15 | 94.85 | 73.84 | 30.14 | 3.34 | 0.00 |
| 3 Months Ago 11/22/2016 | 30.20 | 69.80 | 47.61 | 18.55 | 3.48 | 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 2/23/2016 | 98.99 | 1.01 | 0.00 | 0.00 | 0.00 | 0.00 |

Intensity:

| | |
|---------------------|------------------------|
| D0 Abnormally Dry | D3 Extreme Drought |
| D1 Moderate Drought | D4 Exceptional Drought |
| 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*, the number of Oklahomans currently affected by drought is 3,116,205, down by more than 300,000 from this time last month.

Only a tiny portion of the state (.18%) in area is experiencing Extreme Drought (D3). This small area is found in far eastern Sequoyah and Le Flore counties in the East Central region. However, five much larger areas of Severe Drought (D2) or worse are shown across the state comprising 26.61% in area. Additionally, 67.93% of the state is in Moderate Drought (D1) or worse.

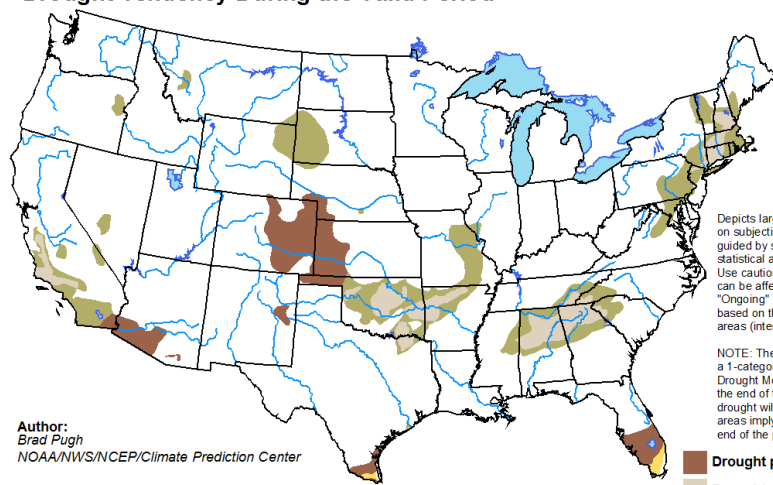
Large parts of the Southwest and South Central regions are shown as free of drought conditions. Precipitation totals in these regions for the 30-day period were well above 100% of normal.

According to the seasonal drought outlook, from mid January through the end of April, drought conditions are likely to persist in the Panhandle, but for the rest of the state, conditions are likely to improve.

Drought is also likely to persist and develop in a few other areas across the southern half of the U.S. The largest contiguous area of persistent drought is likely to continue north of the Oklahoma Panhandle through western Kansas and eastern Colorado. A large portion of southern Florida is experiencing persistent drought as well.

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

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



Author:
Brad Pugh
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 |

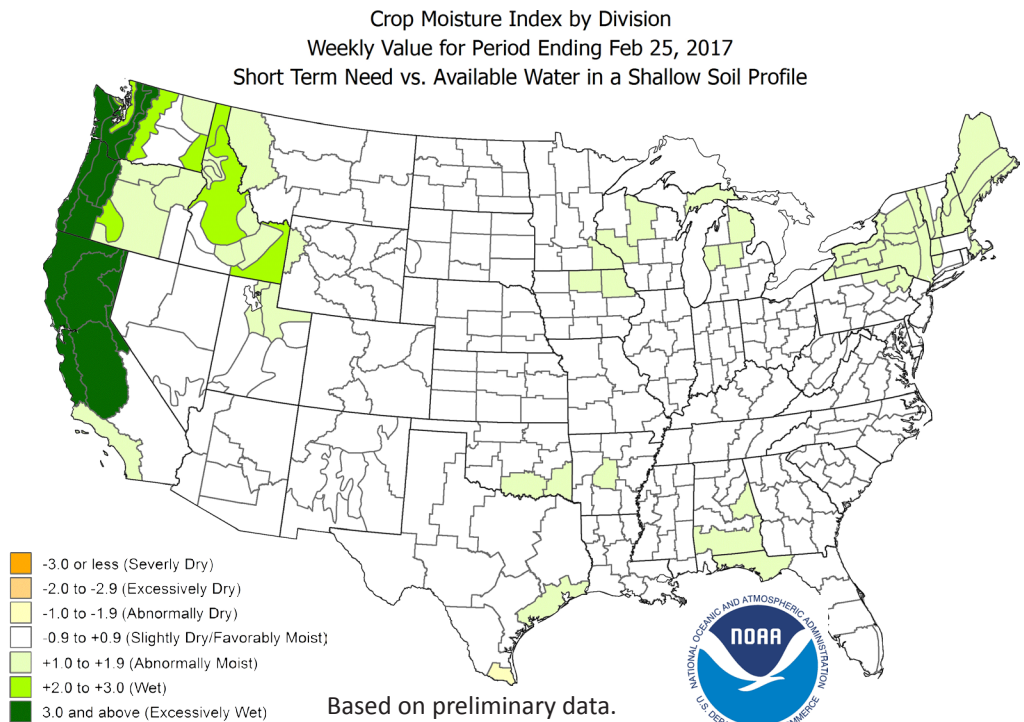


<http://go.usa.gov/3eZ73>

CROP MOISTURE INDEX

According to the NOAA Crop Moisture Index by Division, for the period ending February 25, 2017, all regions of the state are shown as Slightly Dry/Favorably Moist (-0.9 to +0.9) except the South Central and Southeast, which are shown to be Abnormally Moist (+1.0 to +1.9).

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 3/1/2017

