Oklahoma Water Resources Bulletin
& Summary of Current Conditions

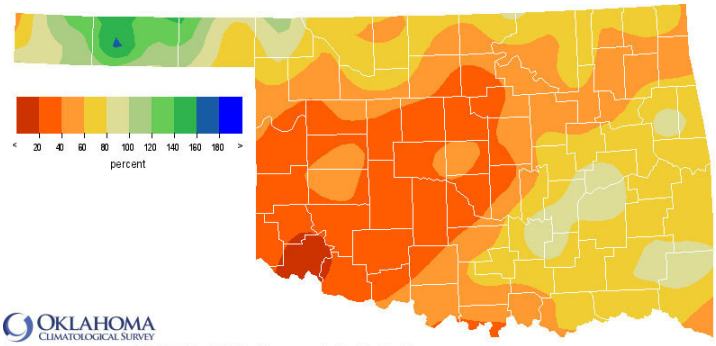
State of Oklahoma OWRB WATER RESOURCES BOARD the water agency

December 26, 2014

PRECIPITATION

Statewide Precipitation

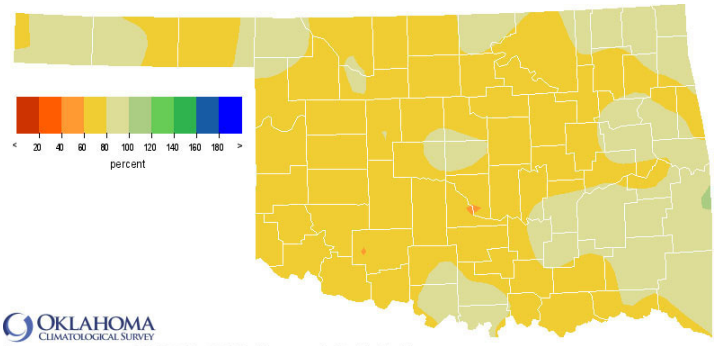
Climate Division	Last 30 Days (Nov 26 – Dec 25, 2014) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Last 365 Days (Dec 26, 2013 – Dec 25, 2014) Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921
Panhandle	0.67"	-0.08"	89%	35th wettest	16.50"	-4.08"	80%	23rd driest
N. Central	0.78"	-0.52"	60%	35th driest	23.96"	-7.46"	76%	17th driest
Northeast	1.44"	-1.00"	59%	37th driest	33.69"	-8.98"	79%	18th driest
W. Central	0.49"	-0.74"	39%	34th driest	20.08"	-8.32"	71%	13th driest
Central	0.79"	-1.19"	40%	24th driest	27.94"	-9.69"	74%	17th driest
E. Central	2.35"	-0.81"	74%	39th wettest	37.11"	-9.03"	80%	25th driest
Southwest	0.44"	-1.00"	31%	28th driest	21.99"	-8.28"	73%	16th driest
S. Central	1.54"	-1.00"	61%	38th driest	31.49"	-9.22"	77%	23rd driest
Southeast	3.01"	-1.10"	73%	46th driest	44.70"	-5.89"	88%	32nd driest
Statewide	1.25"	-0.83"	60%	36th driest	28.50"	-7.97"	78%	18th driest



OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 30 Days

Nov 26, 2014 through Dec 25, 2014



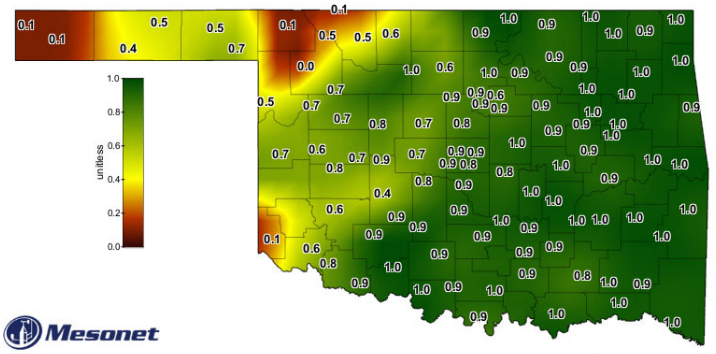
OKLAHOMA CLIMATOLOGICAL SURVEY

Percentage of 1981-2010 Normal Rainfall
Last 365 Days

Dec 26, 2013 through Dec 25, 2014

SOIL MOISTURE

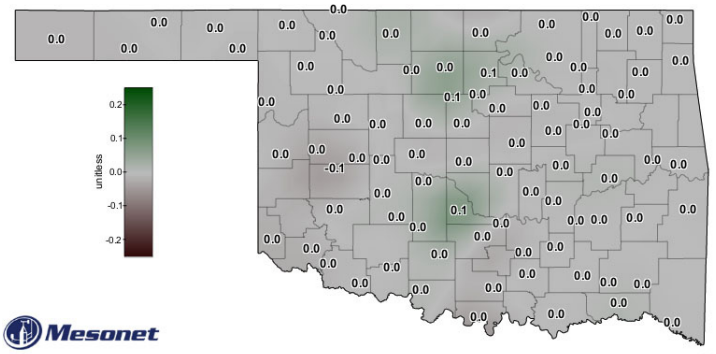
Fractional Water Index[1]
December 25, 2014



Mesonet

Daily Averaged Fractional Water Index at 10 inches

December 25, 2014



Mesonet

7-Day Change in Fractional Water Index at 10 inches

December 25, 2014

[1]*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[2] / Standardized Precipitation Index[3] Through November 2014

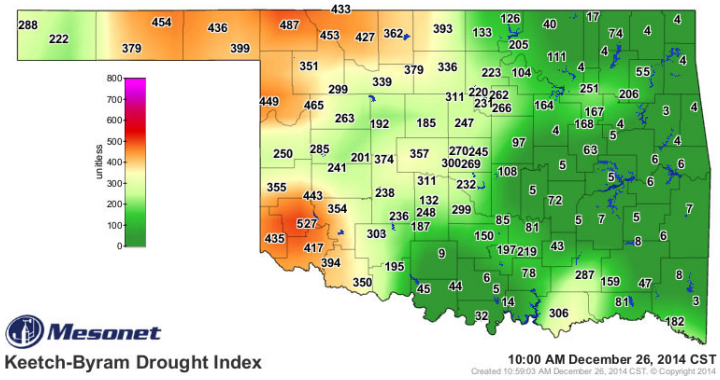
Climate Division	Current Status 12/20/2014	Value 11/22	Value 12/20	Change in Value	3-Month	12-Month	24-Month
Northwest	NEAR NORMAL	-2.07	-1.83	-0.24	NEAR NORMAL	ABNORMALLY DRY	ABORMALLY DRY
North Central	NEAR NORMAL	0.57	0.23	0.34	ABNORMALLY DRY	ABNORMALLY DRY	NEAR NORMAL
Northeast	NEAR NORMAL	0.7	0.65	0.05	NEAR NORMAL	MODERATELY DRY	NEAR NORMAL
West Central	NEAR NORMAL	-1.4	-1.66	0.26	NEAR NORMAL	ABNORMALLY DRY	NEAR NORMAL
Central	NEAR NORMAL	-0.1	-0.33	0.23	NEAR NORMAL	MODERATELY DRY	NEAR NORMAL
East Central	NEAR NORMAL	0.94	1	-0.06	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southwest	MODERATE DROUGHT	-2.15	-2.33	0.18	NEAR NORMAL	ABNORMALLY DRY	MODERATELY DRY
South Central	NEAR NORMAL	0.56	0.64	-0.08	NEAR NORMAL	MODERATELY DRY	ABNORMALLY DRY
Southeast	NEAR NORMAL	0.8	1.1	-0.3	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL

- According to the PDSI, the Southwest climate division is experiencing moderate drought conditions while the rest of the state is classified as near normal. The North Central, Northeast, West Central, Central, and Southwest regions have undergone a PDSI moisture decrease since November 22.
- According to the latest SPI, the Southeast and East Central regions are *not* experiencing longer-term dry conditions (through the last two years); all other regions are shown to have abnormally to moderately dry conditions during the two-year period. The North Central region is shown to have abnormally dry conditions for the 3-month time period, but all other regions are near normal.

Keetch-Byram Drought Fire Index[4]

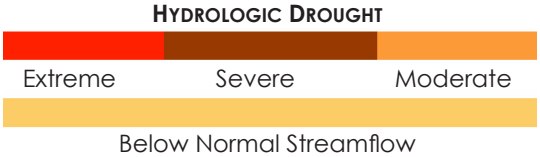
Mesonet Station	Climate Division	Current Value 12/26/2014
Mangum	Southwest	527
Buffalo	Northwest	487
Camargo	West Central	465

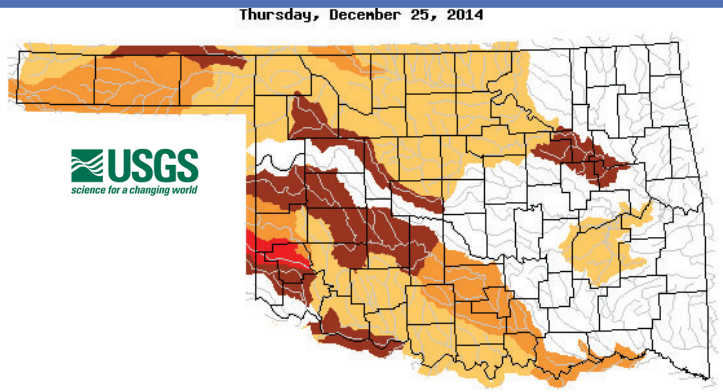
- Stations currently at or above 600 (December 26) = 0
- Stations above 600 on November 26 = 0



Streamflow Conditions

December 25, 2014





[2] The Palmer Drought Severity Index is based upon precipitation, temperature, and soil moisture. Though widely used by government agencies and states to trigger drought relief programs, the PDSI may underestimate or overestimate the severity of ongoing dry periods.

[3] The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while the 6-month SPI can be very effective in showing precipitation over distinct seasons.

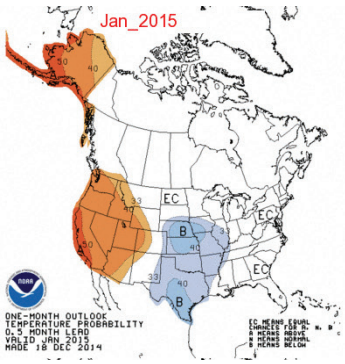
[4] The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

Weather/Drought Forecast

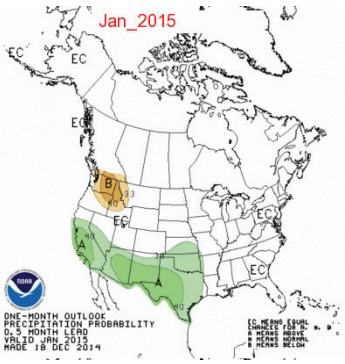
Seasonal Outlook

January

Temperature

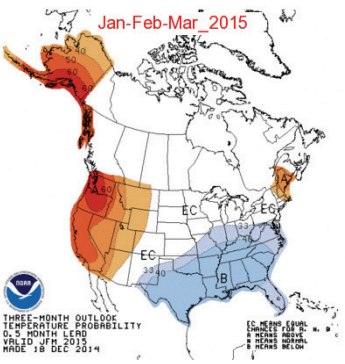


Precipitation

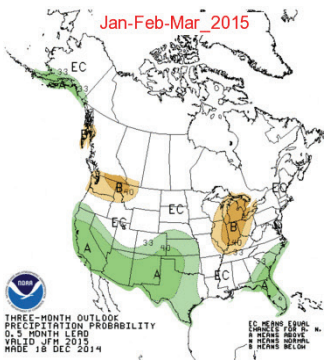


January-February-March

Temperature



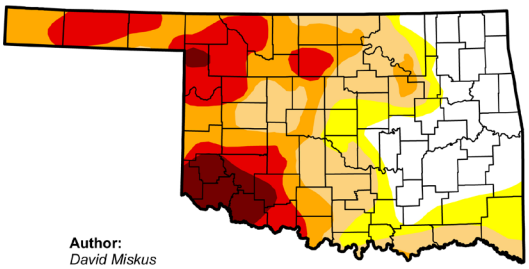
Precipitation



Regional Drought Summary & Outlook

U.S. Drought Monitor

Oklahoma



Author:
David Miskus
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/

December 23, 2014
(Released Wednesday, Dec. 24, 2014)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

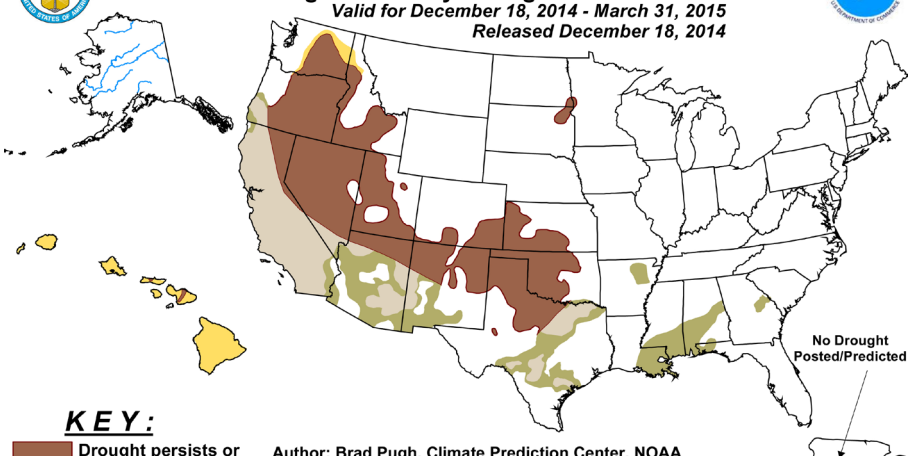
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	25.63	74.37	62.03	40.84	21.67	5.71
Last Week 12/16/2014	28.03	71.97	61.04	40.84	21.67	5.71
3 Months Ago 9/23/2014	17.17	82.83	69.10	49.31	13.59	2.25
Start of Calendar Year 12/31/2013	50.84	49.16	38.17	18.99	4.84	2.40
Start of Water Year 9/30/2014	8.55	91.45	73.31	58.13	20.92	4.64
One Year Ago 12/24/2013	50.84	49.16	38.17	18.99	4.84	2.40

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.

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid for December 18, 2014 - March 31, 2015
Released December 18, 2014



KEY:

- Drought persists or intensifies
- Drought remains but improves
- Drought removal likely
- Drought development likely

Author: Brad Pugh, Climate Prediction Center, NOAA
http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity).
For weekly drought updates, see the latest U.S. Drought Monitor.
NOTE: The tan area 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)

December 23—According to the U.S. Drought Monitor, 1,478,536 Oklahomans are being affected by drought (category D1-D4).

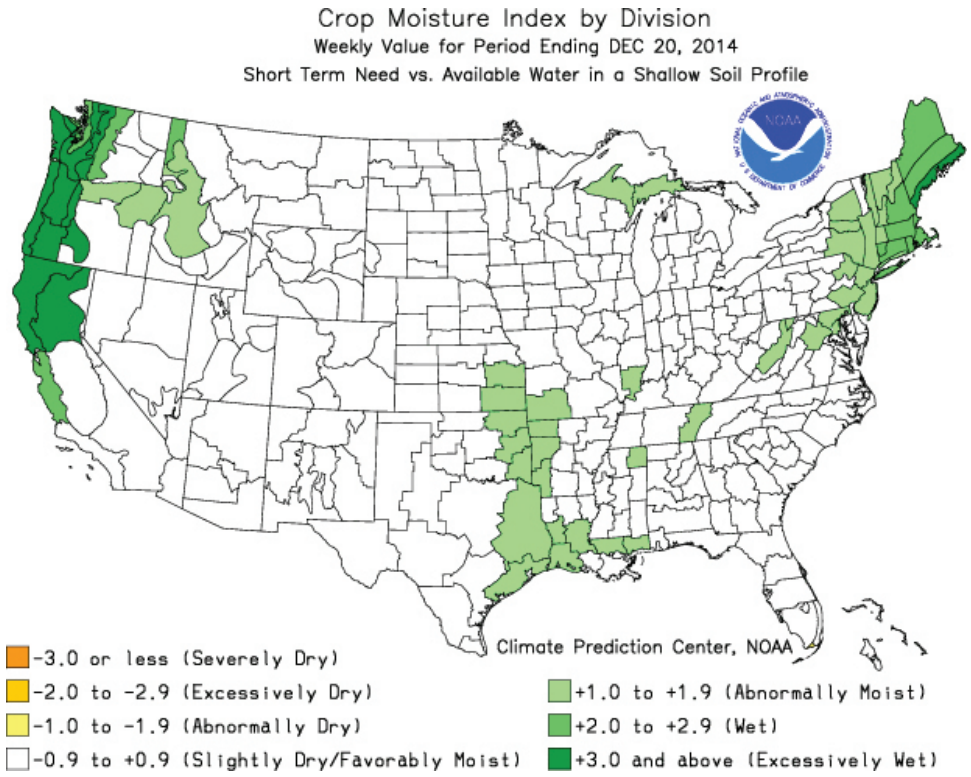
Most of the central and southern High Plains saw little or no precipitation (less than 0.3 inches) in the past week. Locations to the east measured higher totals (0.5-1 inch), although most of that fell on non-drought areas in eastern sections of Nebraska, Kansas, Oklahoma, and Texas.

In the past month, the percentage of Oklahoma classified as being in Exceptional Drought (D4) has increased slightly (from 5.04% to 5.71%). Most of the areas experiencing Exceptional Drought are in the Southwest corner of the state with a small area in northern Ellis County. All areas experiencing Extreme Drought (D3-D4) or worse are in the western half of the state, with an increase in the percentage of the state experiencing Extreme Drought that now includes all of Woodward County and much of Harper and Woods Counties. Most of the Southeast region of the state is still classified as abnormally dry with a large area along the Red River now shown to have Moderate Drought (D1) conditions.

According to the seasonal drought outlook, during the period between mid-December and the end of March, drought conditions will likely persist or intensify in all of the western half of the state, the North Central region, and the western half of the South Central climate region. The rest of the state is expected not to experience drought conditions during this time period.

Crop Report

December 20 -According to the NOAA Crop Moisture Index by Division, the Northeast, East Central, and Southeast regions are experiencing abnormally moist conditions while the rest of the state is classified as experiencing slightly dry/favorably moist conditions.



Reservoir Storage