

# Oklahoma Water Resources Bulletin & Summary of Current Conditions

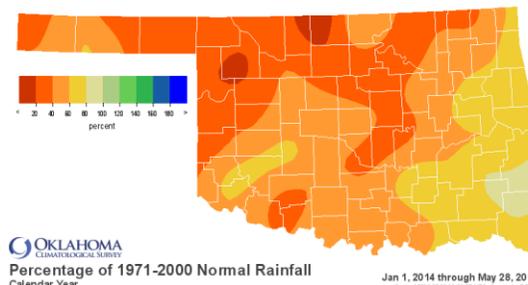
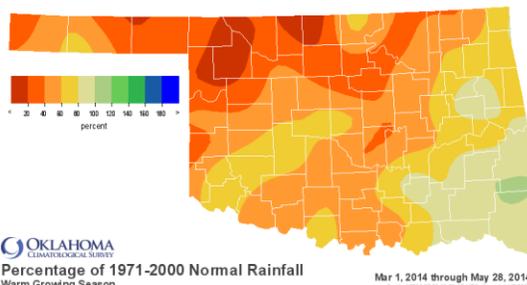


May 29, 2014

## PRECIPITATION

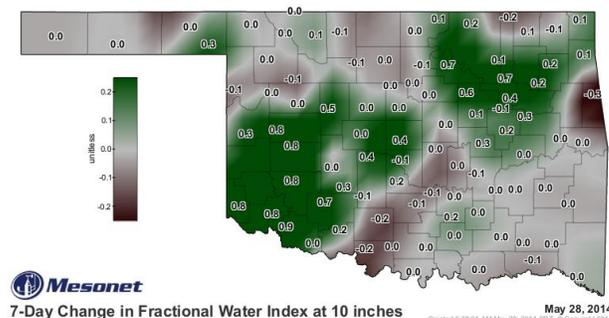
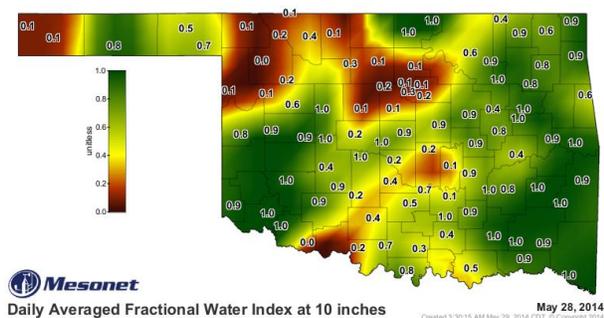
### Statewide Precipitation

CLIMATE DIVISION	Warm Growing Season March 1 – May 28, 2014				Calendar Year January 1 – May 28, 2014			
	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	1.84"	-4.68"	28%	5th driest	2.34"	-5.35"	30%	2nd driest
North Central	3.06"	-6.84"	31%	3rd driest	3.69"	-8.37"	31%	1st driest
Northeast	7.00"	-5.62"	56%	11th driest	7.60"	-8.57"	47%	3rd driest
West Central	3.91"	-5.52"	41%	6th driest	4.24"	-7.21"	37%	5th driest
Central	5.52"	-6.34"	47%	5th driest	5.97"	-9.11"	40%	1st driest
East Central	9.73"	-4.01"	71%	16th driest	11.08"	-7.22"	61%	5th driest
Southwest	5.82"	-3.60"	62%	18th driest	6.16"	-5.65"	52%	9th driest
South Central	7.49"	-4.88"	61%	12th driest	8.54"	-7.93"	52%	3rd driest
Southeast	13.73"	-0.98"	93%	43rd driest	15.94"	-4.73"	77%	14th driest
Statewide	6.31"	-4.87"	56%	8th driest	7.10"	-7.28"	49%	3rd driest



## SOIL MOISTURE

### Fractional Water Index<sup>1</sup> May 28, 2014



<sup>1</sup> 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

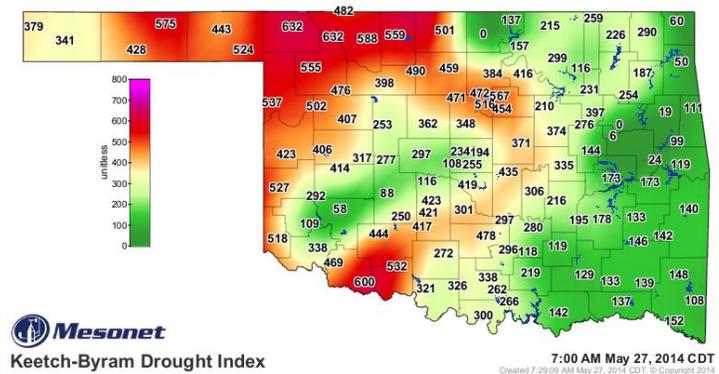
Palmer Drought Severity Index <sup>2</sup>					Standardized Precipitation Index <sup>3</sup> Through April 2014		
CLIMATE DIVISION	CURRENT STATUS 5/24/2014	VALUE		CHANGE IN VALUE	2-MONTH	12-MONTH	24-MONTH
		5/24	5/3				
Northwest	SEVERE DROUGHT	-3.67	-3.11	<b>-0.56</b>	SEVERELY DRY	ABNORMALLY DRY	EXTREMELY DRY
North Central	MODERATE DROUGHT	-2.15	-1.45	<b>-0.70</b>	EXTREMELY DRY	ABNORMALLY DRY	EXCEPTIONALLY DRY
Northwest	MILD DROUGHT	-1.86	-1.27	<b>-0.59</b>	MODERATELY DRY	NEAR NORMAL	SEVERELY DRY
West Central	SEVERE DROUGHT	-3.06	-2.75	<b>-0.31</b>	SEVERELY DRY	MODERATELY DRY	EXTREMELY DRY
Central	MILD DROUGHT	-1.86	-1.19	<b>-0.67</b>	MODERATELY DRY	NEAR NORMAL	ABNORMALLY DRY
East Central	MILD DROUGHT	-1.16	-0.94	<b>-0.22</b>	ABNORMALLY DRY	NEAR NORMAL	MODERATELY DRY
Southwest	SEVERE DROUGHT	-3.50	-3.25	<b>-0.25</b>	MODERATELY DRY	MODERATELY DRY	EXTREMELY DRY
South Central	MILD DROUGHT	-1.43	-0.36	<b>-1.07</b>	NEAR NORMAL	NEAR NORMAL	SEVERELY DRY
Southeast	INCIPIENT DROUGHT	-0.68	-0.94	<b>0.26</b>	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY

- All nine climate divisions are classified as experiencing drought or incipient drought conditions, according to the PDSI. Eight regions have undergone a PDSI moisture decrease since May 3.
- According to the latest SPI, all climate divisions are experiencing longer-term dry conditions (through at least two months or as long as two years or more).

## Keetch-Byram Drought Fire Index<sup>4</sup>

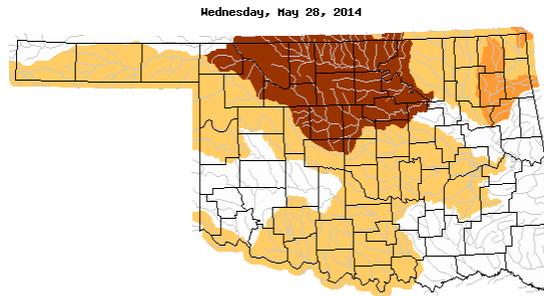
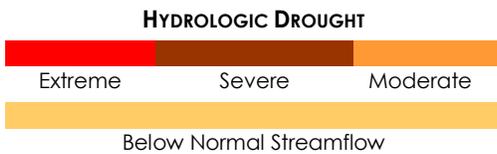
MESONET STATION	CLIMATE DIVISION	CURRENT VALUE 5/27/2014
Buffalo	Northwest	632
Freedom	Northwest	632
Grandfield	Southwest	600

- Stations currently at or above 600 (May 27) = 3
- Stations above 600 on May 5 = 4



## STREAMFLOW CONDITIONS

May 28, 2014



USGS

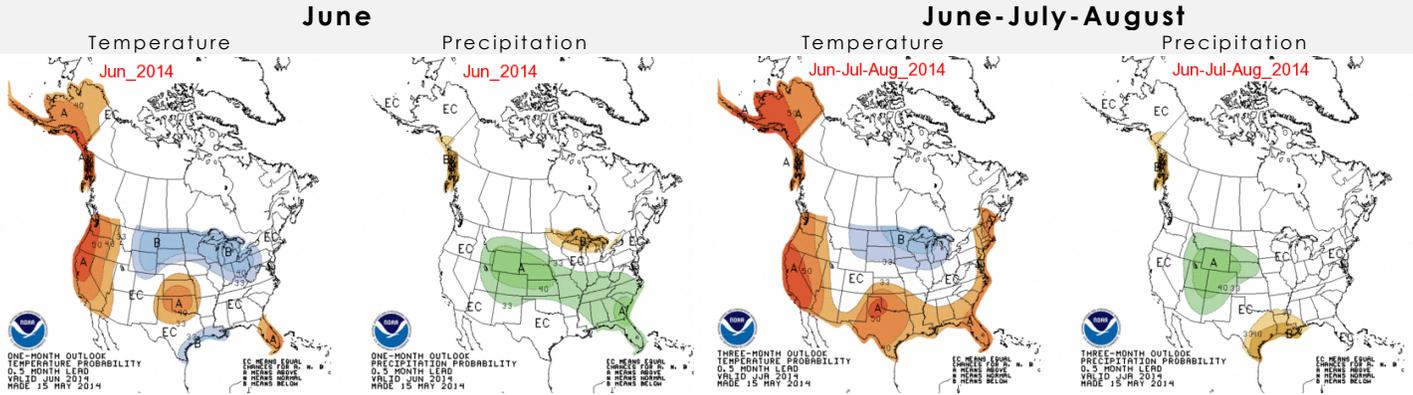
<sup>2</sup> The Palmer Drought Severity Index is based upon precipitation, temperature, and soil moisture. Though widely used by government agencies and states to trigger drought relief programs, the PDSI may underestimate or overestimate the severity of ongoing dry periods.

<sup>3</sup> 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.

<sup>4</sup> 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



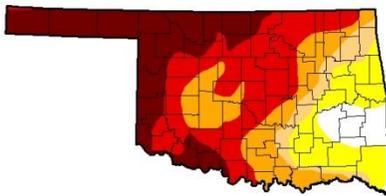
## Regional Drought Summary & Outlook

### U.S. Drought Monitor Oklahoma

May 27, 2014

(Released Thursday, May 29, 2014)  
 Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	5.78	94.22	79.94	73.26	55.04	26.47
Last Week 5/20/14	5.78	94.22	81.06	73.26	61.24	34.25
3 Months Ago 3/25/14	0.09	99.91	62.41	28.86	13.07	2.40
Start of Calendar Year 1/20/14	50.84	43.16	38.17	16.99	4.94	2.40
Start of Water Year 1/9/13	21.74	78.26	43.00	17.62	4.42	1.45
One Year Ago 5/26/13	31.88	68.12	58.80	48.33	26.51	11.34



**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.

Author:  
 Michael Brewer  
 NCCD/NOAA

USDA      NCCD      NOAA  
<http://droughtmonitor.unl.edu/>

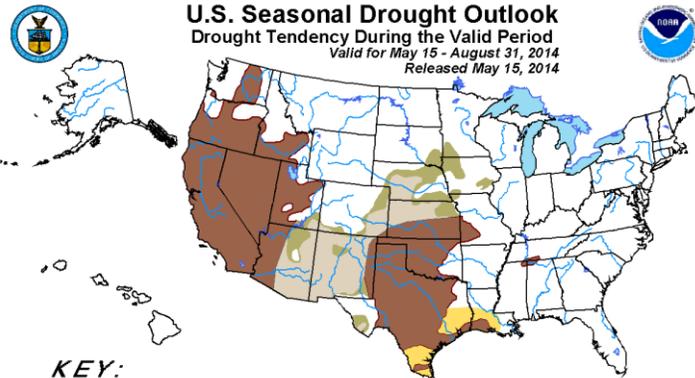
May 27—According to the U.S. Drought Monitor, the southern Plains experienced heavy rainfall during the week. Oklahoma experienced significant improvement especially in Exceptional (D4) and Extreme (D3) Drought throughout the center of the state. Areas from New Mexico and Texas up into western Nebraska also benefitted. Texas experienced widespread improvements in Exceptional (D4), Extreme (D3), and Severe (D2) Drought largely throughout the central part of the state and the Panhandle. Moderate Drought (D1) and Abnormal Dryness (D0) also decreased, mainly in the eastern part of the state. Conversely, limited improvement in drought conditions in western Nebraska was more than offset by degradation of Extreme (D3), Severe (D2), and Moderate Drought (D1) and Abnormal Dryness (D0) in the central and eastern part of the state.

While the state experienced some improvement this week, almost 80 percent of Oklahoma remains in at least Moderate Drought. More than a quarter of the state's land area—including much of western Oklahoma and all of the Panhandle—is now classified in Exceptional Drought, the worst category.

According to the latest Drought Outlook, drought is expected to persist or intensify throughout the general western two-thirds of Oklahoma through August.

### U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period  
 Valid for May 15 - August 31, 2014  
 Released May 15, 2014



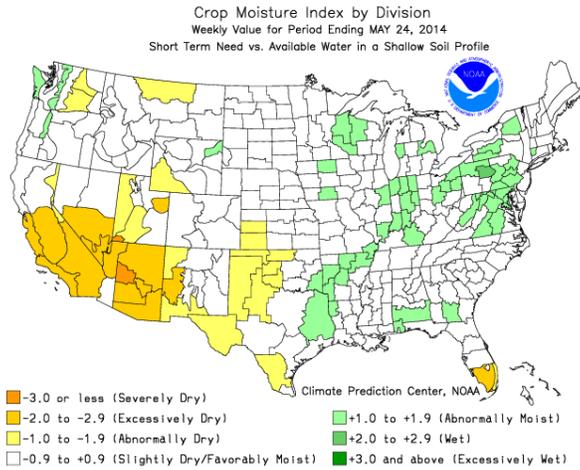
**KEY:**  
 Drought persists or intensifies  
 Drought remains but improves  
 Drought removal likely  
 Drought development likely

Author: Rich Tinker, Climate Prediction Center, NOAA  
[http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.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 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)

## CROP REPORT SUMMARY

May 26, 2014 – Much-needed rainfall was received in Oklahoma last week, especially in the southwest. According to the Oklahoma Mesonet Rainfall table, Hobart received the most precipitation last week, with a total of 4.78 inches. Producers continued to plant row crops. Wheat fields continued to be disaster-stricken, baled for hay, or otherwise abandoned due to the severe drought and freeze damage. Condition of the winter wheat in Oklahoma continued to decline, with 78 percent rated in poor to very poor condition. There were 5.9 days suitable for field work.

Range and pasture conditions continued at mostly fair to poor, with 20 percent rated in very poor condition. Low pond levels and summer forage availability continued to be a concern for livestock producers. Livestock conditions were rated 85 percent good to fair.



## RESERVOIR STORAGE

May 28, 2014

### Oklahoma Surface Water Resources Reservoir Levels and Storage as of 5/28/2014

