

# Oklahoma Water Resources Bulletin & Summary of Current Conditions

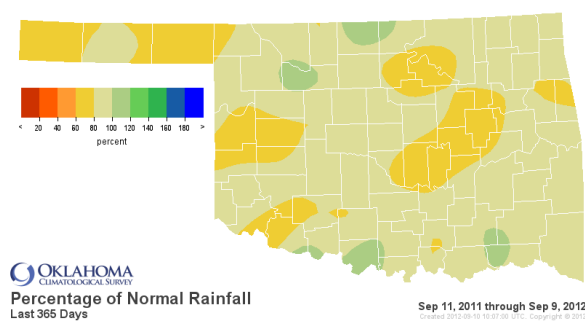
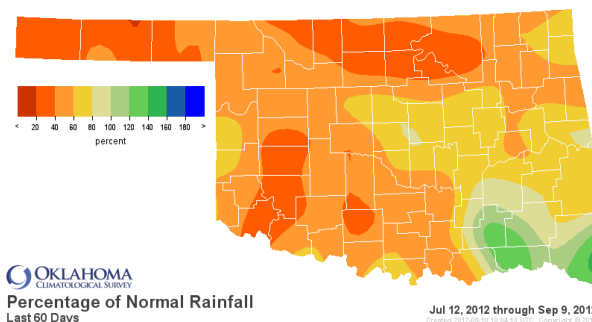


September 13, 2012

## PRECIPITATION

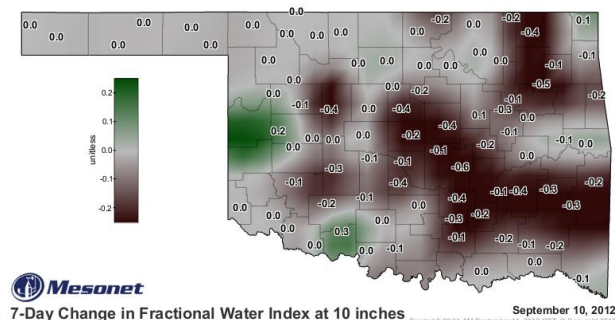
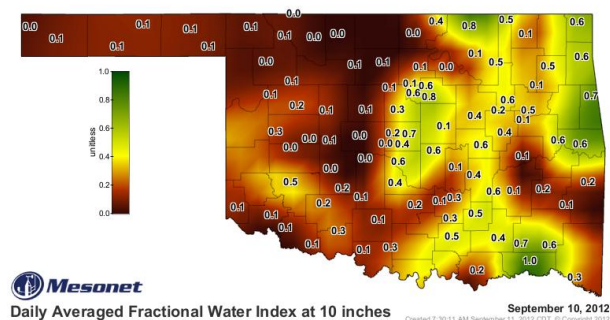
### Statewide Precipitation

CLIMATE DIVISION	Last 60 Days July 12, 2012 – September 9, 2012				Last 365 Days September 11, 2011 – September 9, 2012			
	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	1.65"	-3.05"	35%	3rd driest	15.65"	-5.38"	74%	17th driest
North Central	2.22"	-3.70"	37%	6th driest	28.12"	-3.43"	89%	42nd driest
Northeast	3.35"	-3.30"	50%	11th driest	35.66"	-6.15"	85%	29th driest
West Central	2.43"	-2.58"	49%	18th driest	22.50"	-6.49"	78%	23rd driest
Central	3.20"	-2.33"	58%	16th driest	31.64"	-6.22"	84%	31st driest
East Central	4.13"	-2.15"	66%	23rd driest	37.61"	-8.31"	82%	21st driest
Southwest	2.22"	-2.89"	43%	14th driest	26.85"	-3.84"	87%	41st driest
South Central	3.04"	-2.45"	55%	18th driest	35.06"	-5.75"	86%	34th driest
Southeast	6.32"	-0.07"	99%	39th driest	47.10"	-3.69"	93%	36th driest
<b>Statewide</b>	<b>3.12"</b>	<b>-2.56"</b>	<b>55%</b>	<b>12th driest</b>	<b>31.06"</b>	<b>-5.50"</b>	<b>85%</b>	<b>26th driest</b>



## SOIL MOISTURE

### Fractional Water Index<sup>1</sup> September 10, 2012



<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

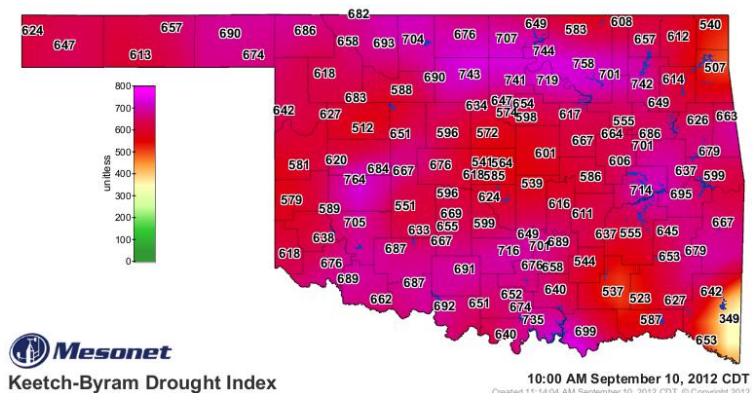
Palmer Drought Severity Index <sup>1</sup>					Standardized Precipitation Index <sup>2</sup> Through August 2012			
CLIMATE DIVISION	CURRENT STATUS 9/8/2012	VALUE		CHANGE IN VALUE	3-MONTH	6-MONTH	9-MONTH	12-MONTH
		9/8	8/4					
Northwest	EXTREME DROUGHT	-4.93	-4.54	<b>-0.39</b>	SEVERELY DRY	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL
North Central	SEVERE DROUGHT	-3.59	-3.19	<b>-0.40</b>	EXTREMELY DRY	ABNORMALLY DRY	NEAR NORMAL	NEAR NORMAL
Northeast	SEVERE DROUGHT	-3.76	-3.60	<b>-0.16</b>	SEVERELY DRY	ABNORMALLY DRY	ABNORMALLY DRY	NEAR NORMAL
West Central	SEVERE DROUGHT	-3.96	-4.00	<b>0.04</b>	MODERATELY DRY	MODERATELY DRY	ABNORMALLY DRY	NEAR NORMAL
Central	EXTREME DROUGHT	-4.03	-4.14	<b>0.11</b>	MODERATELY DRY	ABNORMALLY DRY	NEAR NORMAL	NEAR NORMAL
East Central	EXTREME DROUGHT	-4.14	-4.26	<b>0.12</b>	NEAR NORMAL	ABNORMALLY DRY	NEAR NORMAL	NEAR NORMAL
Southwest	EXTREME DROUGHT	-4.01	-3.94	<b>-0.07</b>	ABNORMALLY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	EXTREME DROUGHT	-4.18	-4.21	<b>0.03</b>	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southeast	SEVERE DROUGHT	-3.70	-3.92	<b>0.22</b>	NEAR NORMAL	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL

- All nine climate divisions continue to experience either extreme or severe drought conditions, according to the PDSI. Four climate divisions have undergone a PDSI moisture decrease since August 4. Eight climate divisions are experiencing near long-term dry conditions, according to the SPI.

## Keetch-Byram Drought Fire Index<sup>3</sup>

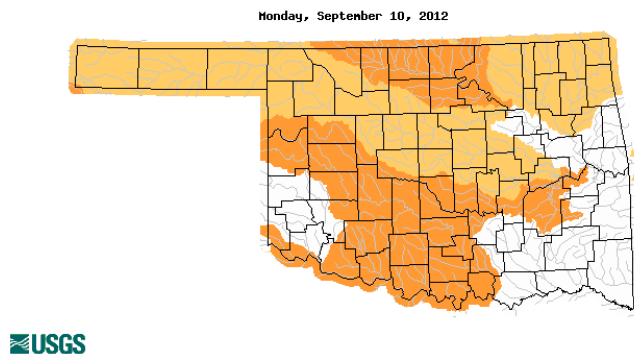
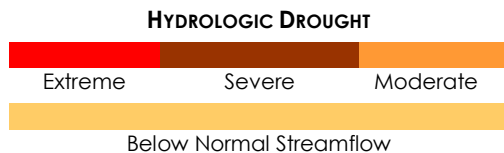
MESONET STATION	CLIMATE DIVISION	CURRENT VALUE 9/10/2012
Bessie	West Central	764
Wynona	Northeast	758
Burbank	Northeast	744

- Stations currently at or above 600 (September 10) = 92
- Stations above 600 on August 6 = 102



## STREAMFLOW CONDITIONS

September 10, 2012



<sup>1</sup> The Palmer Drought Severity Index is calculated based on 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>2</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.

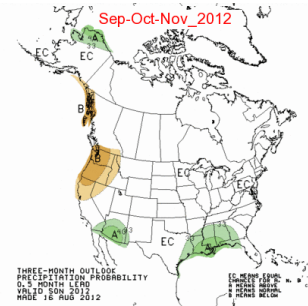
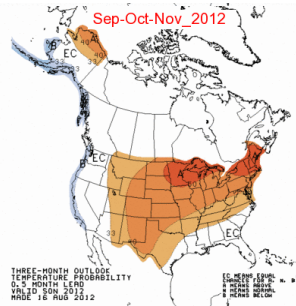
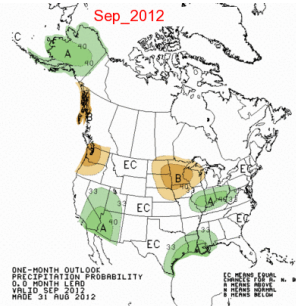
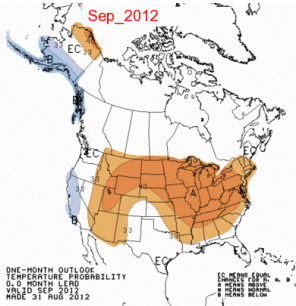
<sup>3</sup> The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

# WEATHER/DROUGHT FORECAST

## Seasonal Outlook

August 2012

Sep-Oct-Nov 2012

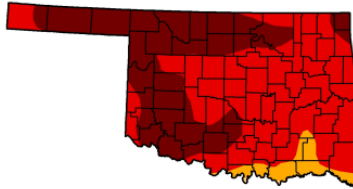


## Regional Drought Summary & Outlook

### U.S. Drought Monitor Oklahoma

September 11, 2012  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.89	94.68	39.66
Last Week (09/04/2012 map)	0.00	100.00	100.00	99.79	91.04	39.66
3 Months Ago (06/12/2012 map)	46.78	53.22	21.54	10.49	1.70	0.00
Start of Calendar Year (12/27/2011 map)	14.83	85.17	78.76	50.55	27.48	3.33
Start of Water Year (09/27/2011 map)	0.00	100.00	100.00	100.00	78.97	66.42
One Year Ago (09/06/2011 map)	0.00	100.00	100.00	100.00	85.44	69.15



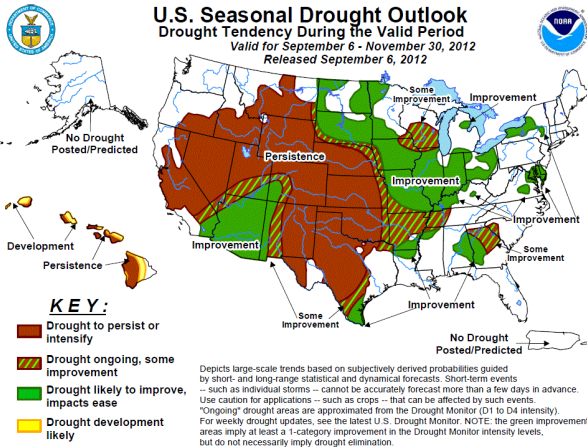
**Intensity:**

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>

Released Thursday, September 13, 2012  
David Simeral, Western Regional Climate Center



August 7—The latest U.S. Drought Monitor reports that persistence of hot and dry conditions led to expansion of Extreme Drought (D3) and Exceptional Drought (D4) in northern and central Oklahoma as well as southeastern Texas. Temperatures soared near 100 degrees as very windy conditions exacerbated drought in the Oklahoma Panhandle. Rainfall in the Texas' Hill Country totaled no more than 50 percent of normal during the last one to two months. Northeastern Arkansas continued to receive rainfall, reducing drought intensity from Extreme Drought (D3) to Severe Drought (D2). The National Climatic Data Center's "State of the Climate" report for August 2012 indicated that the contiguous U.S. experienced the third hottest summer on record.

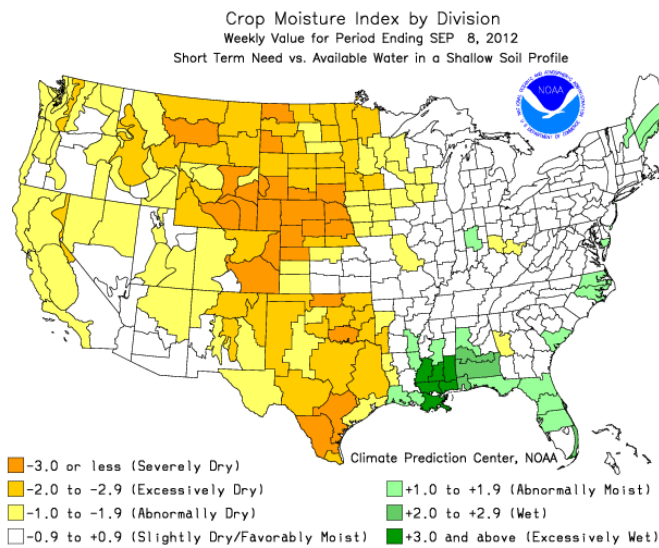
Currently, almost 95 percent of Oklahoma is in Extreme Drought. Almost 40 percent of the state—including much of western Oklahoma and the Panhandle—is considered Exceptional, the worst drought category.

According to the latest Drought Outlook (September 6), while the seasonal decline in temperatures over the next few months should reduce surface water lost to evaporation and vegetative growth, and a developing El Nino event could increase chances of above normal rainfall, drought conditions are expected to persist or intensify for most of Oklahoma over the next three months.

## CROP REPORT SUMMARY

September 10, 2012 – A few areas in west central Oklahoma received more than an inch of rain, including Putnam, Butler and Fairview, while a cold front moved through and significantly dropped temperatures. Wheat planting began in very limited areas while seedbed preparation remained significantly behind normal. Conditions of row crops and hay showed no significant improvements. Half of the corn and a quarter of the sorghum were harvested by the end of the week. Topsoil and subsoil moisture conditions fell again, rated mostly very short. There were 6.3 days suitable for field work.

Conditions of pasture and range continued to be rated mostly poor to very poor. Livestock operators continued to supplement feed and hay their herds due to the lack of good pasture. Livestock conditions were rated mostly good to fair.



## RESERVOIR STORAGE

September 10, 2012

