

# Oklahoma Water Resources Bulletin & Summary of Current Conditions

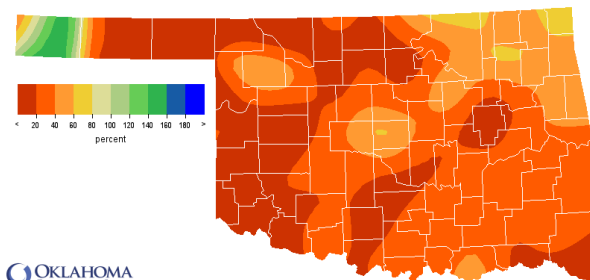


December 6, 2012

## PRECIPITATION

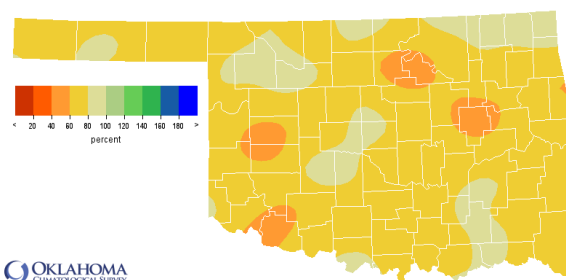
### Statewide Precipitation

CLIMATE DIVISION	Last 60 Days October 5, 2012 – December 3, 2012				Last 365 Days December 5, 2011 – December 3, 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	0.61"	-1.81"	25%	15th driest	14.70"	-6.38"	70%	12th driest
North Central	1.14"	-3.38"	25%	8th driest	23.41"	-8.20"	74%	15th driest
Northeast	3.38"	-3.62"	48%	19th driest	31.04"	-10.86"	74%	10th driest
West Central	0.45"	-3.62"	11%	7th driest	18.42"	-10.64"	63%	7th driest
Central	2.02"	-4.17"	33%	13th driest	26.53"	-11.39"	70%	13th driest
East Central	2.51"	-5.79"	30%	12th driest	30.32"	-15.68"	66%	6th driest
Southwest	0.84"	-3.62"	19%	6th driest	21.45"	-9.31"	70%	13th driest
South Central	1.67"	-5.38"	24%	9th driest	28.89"	-11.98"	71%	10th driest
Southeast	2.14"	-7.64"	22%	3rd driest	37.49"	-13.32"	74%	9th driest
<b>Statewide</b>	<b>1.69"</b>	<b>-4.27"</b>	<b>28%</b>	<b>6th driest</b>	<b>25.83"</b>	<b>-10.79"</b>	<b>71%</b>	<b>7th driest</b>



OKLAHOMA CLIMATOLOGICAL SURVEY  
Percentage of Normal Rainfall  
Last 60 Days

Oct 5, 2012 through Dec 3, 2012  
Created 5:30:11 AM December 4, 2012 CST. © Copyright 2012



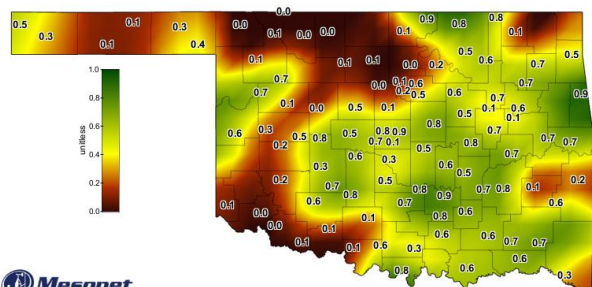
OKLAHOMA CLIMATOLOGICAL SURVEY  
Percentage of Normal Rainfall  
Last 365 Days

Dec 5, 2011 through Dec 3, 2012  
Created 5:30:11 AM December 4, 2012 CST. Copyright © 2012

## SOIL MOISTURE

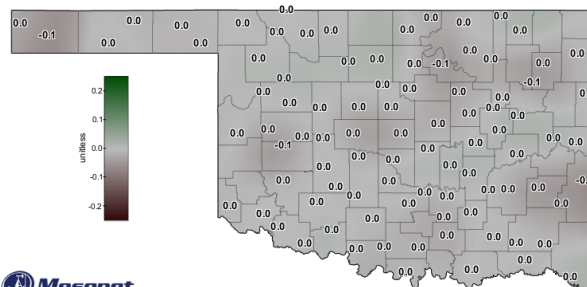
### Fractional Water Index<sup>1</sup>

December 3, 2012



Mesonet  
Daily Averaged Fractional Water Index at 10 inches

December 3, 2012  
Created 6:30:11 AM December 4, 2012 CST. © Copyright 2012



Mesonet  
7-Day Change in Fractional Water Index at 10 inches

December 3, 2012  
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<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

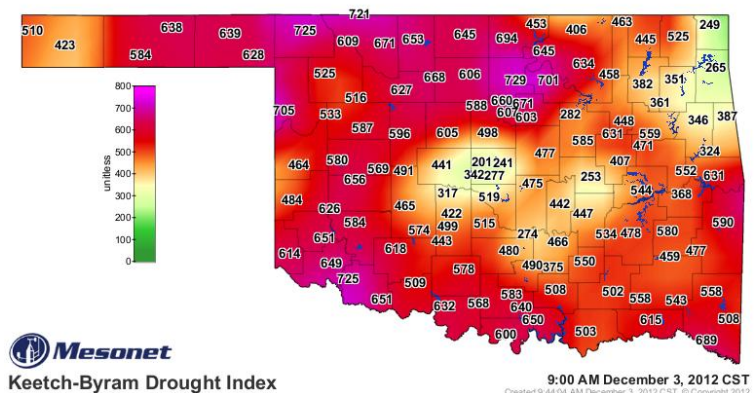
Palmer Drought Severity Index <sup>1</sup>					Standardized Precipitation Index <sup>2</sup> Through October 2012			
CLIMATE DIVISION	CURRENT STATUS 12/1/2012	VALUE		CHANGE IN VALUE	3-MONTH	6-MONTH	9-MONTH	12-MONTH
		12/1	11/3					
Northwest	EXTREME DROUGHT	-4.09	-3.57	-0.52	ABNORMALLY DRY	EXTREMELY DRY	ABNORMALLY DRY	NEAR NORMAL
North Central	SEVERE DROUGHT	-3.54	-3.55	0.01	EXTREMELY DRY	EXCEPTIONALLY DRY	ABNORMALLY DRY	NEAR NORMAL
Northeast	SEVERE DROUGHT	-3.42	-3.35	-0.07	SEVERELY DRY	EXCEPTIONALLY DRY	ABNORMALLY DRY	NEAR NORMAL
West Central	SEVERE DROUGHT	-3.60	-3.56	-0.04	NEAR NORMAL	SEVERELY DRY	MODERATELY DRY	NEAR NORMAL
Central	SEVERE DROUGHT	-3.63	-3.52	-0.11	NEAR NORMAL	SEVERELY DRY	ABNORMALLY DRY	NEAR NORMAL
East Central	SEVERE DROUGHT	-3.57	-3.42	-0.15	ABNORMALLY DRY	MODERATELY DRY	MODERATELY DRY	NEAR NORMAL
Southwest	SEVERE DROUGHT	-3.64	-3.45	-0.19	NEAR NORMAL	MODERATELY DRY	ABNORMALLY DRY	NEAR NORMAL
South Central	SEVERE DROUGHT	-3.79	-3.58	-0.21	NEAR NORMAL	MODERATELY DRY	ABNORMALLY DRY	NEAR NORMAL
Southeast	SEVERE DROUGHT	-3.64	-3.33	-0.31	ABNORMALLY DRY	SEVERELY DRY	SEVERELY DRY	NEAR NORMAL

- All nine climate divisions are experiencing severe to extreme drought conditions, according to the PDSI. Eight climate divisions have undergone a PDSI moisture decrease since November 3. All climate divisions continue to experience near long-term dry conditions, especially over the past six to nine months, according to the SPI.

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

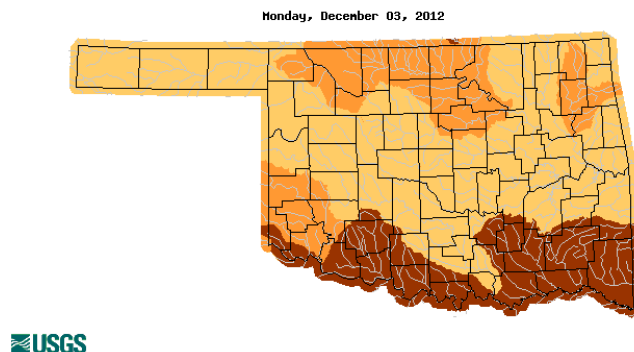
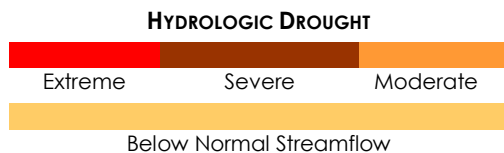
MESONET STATION	CLIMATE DIVISION	CURRENT VALUE 12/3/2012
Red Rock	North Central	729
Buffalo	Northwest	725
Tipton	Southwest	725

- Stations currently at or above 600 (December 3) = 39
- Stations above 600 on November 5 = 30



## STREAMFLOW CONDITIONS

December 3, 2012



<sup>1</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>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.

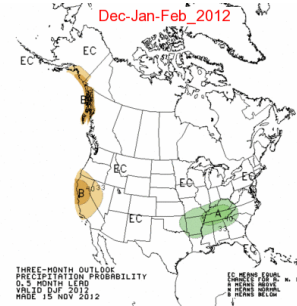
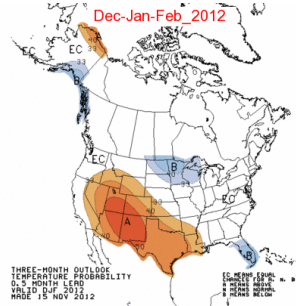
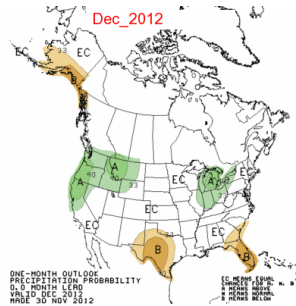
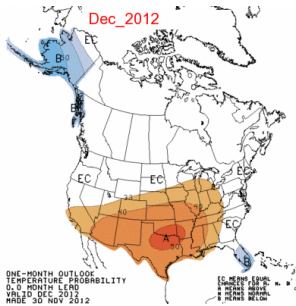
<sup>3</sup> The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

# WEATHER/DROUGHT FORECAST

## Seasonal Outlook

### December

### Dec-Jan-Feb



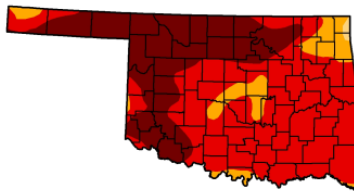
## Regional Drought Summary & Outlook

### U.S. Drought Monitor

December 4, 2012  
Valid 7 a.m. EST

#### Oklahoma

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.64	90.56	34.56
Last Week (11/27/2012 map)	0.00	100.00	100.00	99.64	90.50	34.46
3 Months Ago (09/04/2012 map)	0.00	100.00	100.00	99.79	91.04	39.66
Start of Calendar Year (12/27/2011 map)	14.83	85.17	78.76	50.55	27.48	3.33
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	99.98	95.33	42.09
One Year Ago (11/29/2011 map)	7.33	92.67	85.70	59.58	39.92	10.27



#### 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.

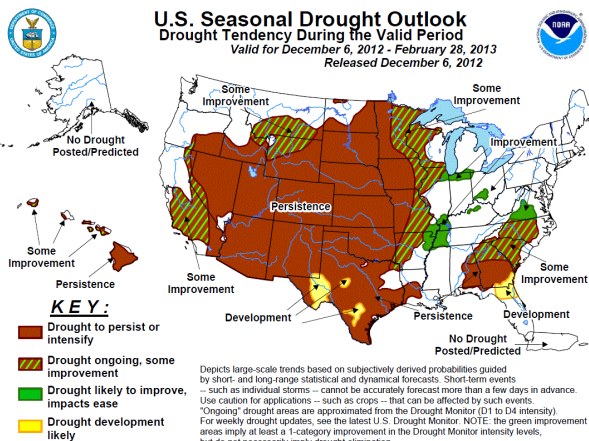
<http://droughtmonitor.unl.edu>

USDA National Drought Mitigation Center  
Released Thursday, December 6, 2012  
Richard Tinker, NOAA/CPC

December 4—The latest U.S. Drought Monitor reports that areas of dryness and drought remained unchanged for most of the plains region, given the cooler and drier time of year. However, areas of deterioration were identified across various parts of Texas, central Louisiana, east-central Missouri, eastern Kansas, and the Panhandles of Texas and Oklahoma. In the Panhandles region, D4 coverage increased as dryland wheat conditions deteriorated. Dalhart, TX received 6.04 inches of rain in 2011 and 6.35 inches to date in 2012, both totals more than 2 inches below the driest year on record for the previous 62 years.

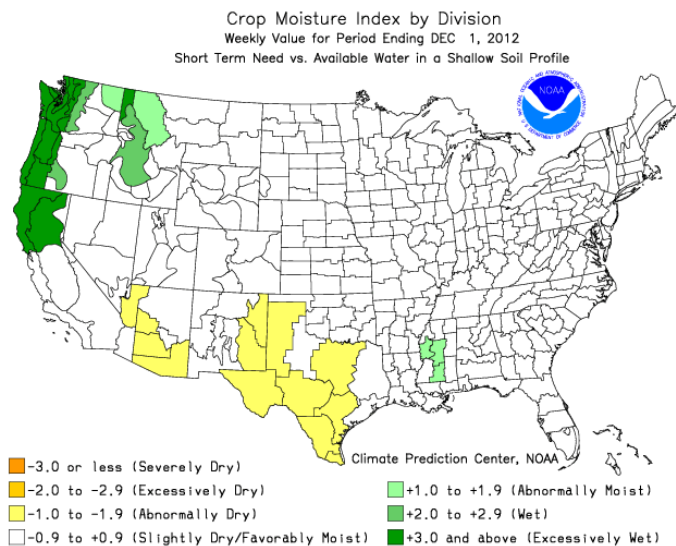
More than 90 percent of Oklahoma is classified in Extreme Drought. Almost 35 percent of the state—including much of northern and western Oklahoma—is considered Exceptional, the most intense drought category.

According to the latest Drought Outlook (December 6), drought persistence is favored across much of the west and most of the Great Plains region.



## CROP REPORT SUMMARY

November 26, 2012 – Small grains and canola were rated in fair to poor condition with no significant moisture to aid development. Reports of fields not yet emerged or in declining condition were common. Wheat emergence was behind normal progress and only 14 percent of the crop was rated good to excellent. The continuing drought reduced the potential for small grain grazing. Livestock operators were also faced with dried up ponds, poor grasses and continued supplementation of feed. Both topsoil and subsoil moisture conditions continued to be rated short to very short, declining further over the past week. There were 6.8 days suitable for fieldwork.



## RESERVOIR STORAGE

December 3, 2012

