# Oklahoma Water Resources Bulletin & Summary of Current Conditions



#### December 6, 2012

## **P**RECIPITATION

Statewide Precipitation												
	Oc	Last 6 – tober 5, 2012	0 Days December	3, 2012	Last 365 Days December 5, 2011 – December 3, 2012							
CLIMATE DIVISION	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				
Statewide	1.69"	-4.27"	28%	6th driest	25.83"	-10.79"	71%	7th driest				





## SOIL MOISTURE

Fractional Water Index<sup>1</sup> December 3, 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													
Palm	er Drought Sev	verity I	ndex <sup>1</sup>		Standardized Precipitation Index <sup>2</sup> Through October 2012								
CLIMATE DIVISION	CURRENT STATUS 12/1/2012	VA 12/1	LUE 11/3	CHANGE IN VALUE	3-Month	6-MONTH	9-MONTH	12-Month					
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>





<sup>&</sup>lt;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>&</sup>lt;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>&</sup>lt;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.



### **Regional Drought Summary & Outlook**



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.



## **R**ESERVOIR **S**TORAGE

#### December 3, 2012

