

Oklahoma Water Resources Bulletin & Summary of Current Conditions

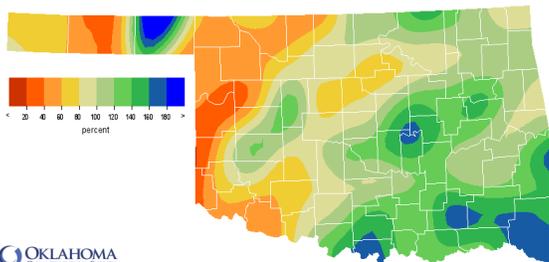


November 14, 2013

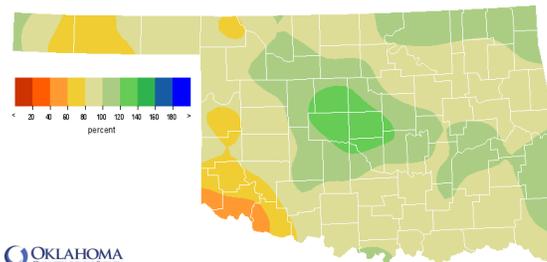
PRECIPITATION

Statewide Precipitation

CLIMATE DIVISION	Last 30 Days October 14, 2013 – November 12, 2013				Last 365 Days November 13, 2012 – November 12, 2013			
	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	0.93"	-0.37"	72%	40th wettest	17.58"	-3.51"	83%	33rd driest
North Central	1.85"	-0.52"	78%	42nd wettest	30.65"	-1.00"	97%	42nd wettest
Northeast	4.03"	+0.47"	113%	27th wettest	42.28"	+0.31"	101%	35th wettest
West Central	1.77"	-0.41"	81%	45th wettest	25.21"	-3.88"	87%	42nd driest
Central	3.33"	+0.08"	102%	27th wettest	41.82"	+3.83"	110%	17th wettest
East Central	4.78"	+0.58"	114%	22nd wettest	44.38"	-1.71"	96%	46th wettest
Southwest	1.73"	-0.69"	71%	40th driest	24.86"	-5.94"	81%	28th driest
South Central	4.72"	+1.01"	127%	19th wettest	35.71"	-5.25"	87%	34th driest
Southeast	7.12"	+2.21"	145%	12th wettest	49.42"	-1.52"	97%	46th driest
Statewide	3.34"	+0.25"	108%	31st wettest	34.90"	-1.79"	95%	45th wettest



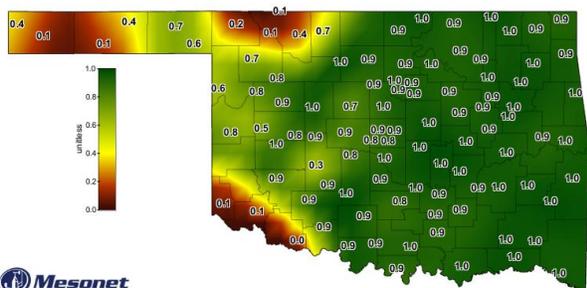
OKLAHOMA CLIMATOLOGICAL SURVEY
Percentage of 1971-2000 Normal Rainfall
Last 30 Days
Oct 14, 2013 through Nov 12, 2013
www.csl.tulane.edu Copyright © 2013



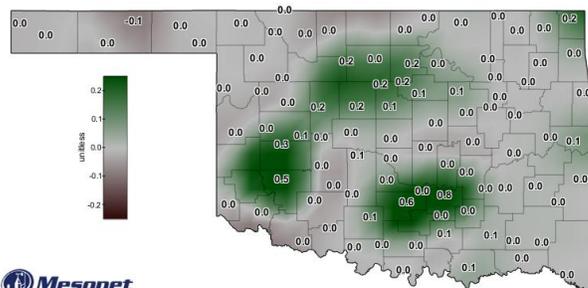
OKLAHOMA CLIMATOLOGICAL SURVEY
Percentage of 1971-2000 Normal Rainfall
Last 365 Days
Nov 13, 2012 through Nov 12, 2013
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SOIL MOISTURE

Fractional Water Index¹ November 12, 2013



Mesonet
Daily Averaged Fractional Water Index at 10 inches
November 12, 2013
Created 5:30:07 AM November 12, 2013 CST. © Copyright 2013



Mesonet
7-Day Change in Fractional Water Index at 10 inches
November 15, 2013
Created 5:30:07 AM November 12, 2013 CST. © Copyright 2013

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

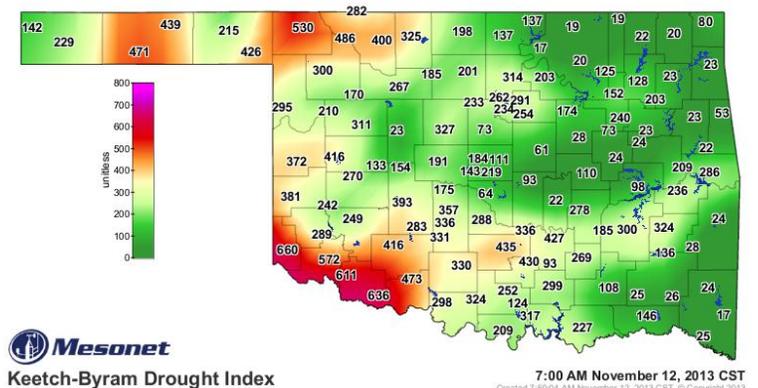
Palmer Drought Severity Index ¹				Standardized Precipitation Index ² Through October 2013				
CLIMATE DIVISION	CURRENT STATUS 11/9/2013	VALUE 11/9	CHANGE 10/12 IN VALUE	3-MONTH	6-MONTH	12-MONTH	24-MONTH	
Northwest	INCIPIENT DROUGHT	-0.56	-1.02	0.46	MODERATELY MOIST	MODERATELY MOIST	ABNORMALLY MOIST	NEAR NORMAL
North Central	UNUSUAL MOIST SPELL	2.23	1.52	0.71	NEAR NORMAL	ABNORMALLY MOIST	NEAR NORMAL	NEAR NORMAL
Northeast	MOIST SPELL	1.67	0.96	0.71	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
West Central	NEAR NORMAL	0.24	2.07	-1.83	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	ABNORMALLY DRY
Central	UNUSUAL MOIST SPELL	2.35	1.54	0.81	NEAR NORMAL	MODERATELY MOIST	MODERATELY MOIST	NEAR NORMAL
East Central	INCIPIENT MOIST SPELL	0.80	0.28	0.52	SEVERELY DRY	NEAR NORMAL	NEAR NORMAL	ABNORMALLY DRY
Southwest	MILD DROUGHT	-1.31	-1.43	0.12	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	INCIPIENT DROUGHT	-0.82	-0.66	-0.16	ABNORMALLY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southeast	MOIST SPELL	1.18	-0.86	2.04	NEAR NORMAL	ABNORMALLY MOIST	NEAR NORMAL	NEAR NORMAL

- Three climate divisions, all in dry western and southern Oklahoma, are classified as experiencing drought (or incipient drought) conditions, according to the PDSI. Two regions have undergone a PDSI moisture decrease since October 12.
- According to the latest SPI, three climate divisions are experiencing longer-term dry conditions.

Keetch-Byram Drought Fire Index³

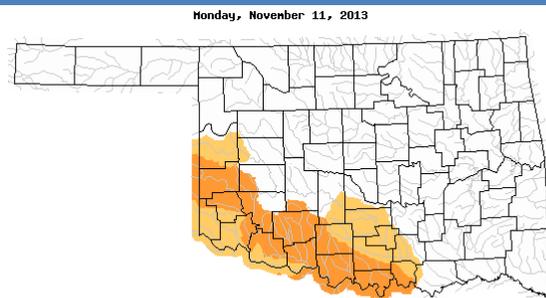
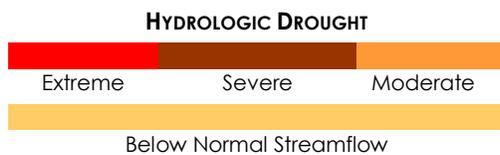
MESONET STATION	CLIMATE DIVISION	CURRENT VALUE 11/12/2013
Hollis	Southwest	660
Grandfield	Southwest	636
Tipton	Southwest	611

- Stations currently at or above 600 (November 12) = 3
- Stations above 600 on October 14 = 10



STREAMFLOW CONDITIONS

November 11, 2013



¹ 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.

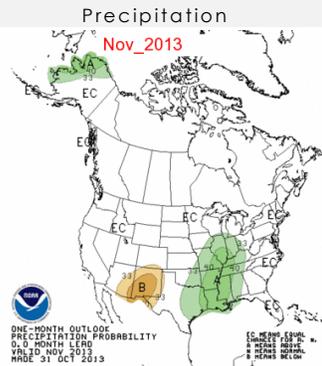
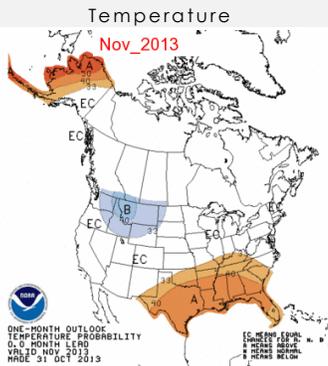
² The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while the 6-month SPI can be very effective in showing precipitation over distinct seasons.

³ 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.

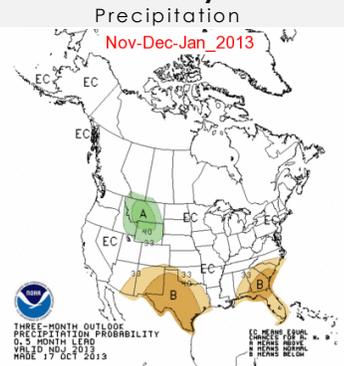
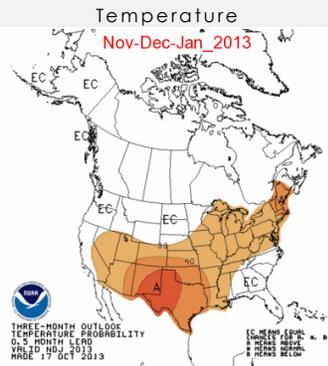
WEATHER/DROUGHT FORECAST

Seasonal Outlook

November



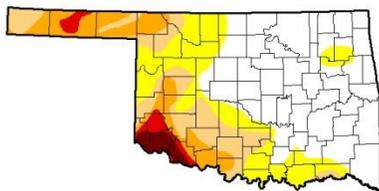
November-December-January



Regional Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

November 12, 2013
(Released Thursday, Nov. 14, 2013)
Valid 7 a.m. EST



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.24	49.76	29.88	15.43	4.48	2.08
Last Week 11/5/2013	47.95	52.05	30.50	14.58	4.48	2.08
3 Months Ago 8/15/2013	49.40	50.60	32.98	22.62	12.57	0.19
Start of Calendar Year 1/1/2013	0.00	100.00	100.00	100.00	94.89	37.06
Start of Water Year 10/1/2012	21.74	78.26	43.00	17.62	4.42	1.45
One Year Ago 11/15/2012	0.00	100.00	100.00	99.53	71.70	31.93

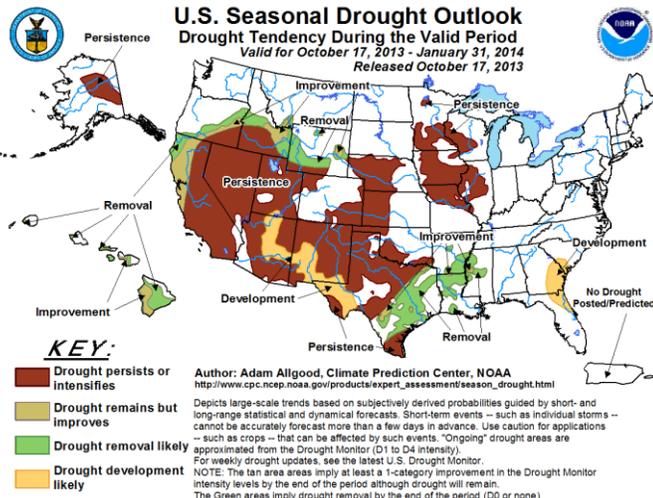
Intensity:
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

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

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Western Regional Climate Center

USDA
 National Drought Initiative
<http://droughtmonitor.unl.edu/>

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period Valid for October 17, 2013 - January 31, 2014 Released October 17, 2013



November 12—According to the U.S. Drought Monitor, the Plains were generally dry during the past week with the exception of about one inch of precipitation in southeastern Nebraska and southeastern Kansas. In Oklahoma, light rainfall (1-2 inches) led to minor improvements in Moderate Drought (D1) and Abnormally Dry (D0) areas in south central and western regions while conditions deteriorated in north central Oklahoma as continued dryness degraded soil moisture conditions leading to the slight expansion of areas of Severe Drought (D2) and Moderate Drought (D1). During the past week, temperatures were below normal, especially in the northern tier.

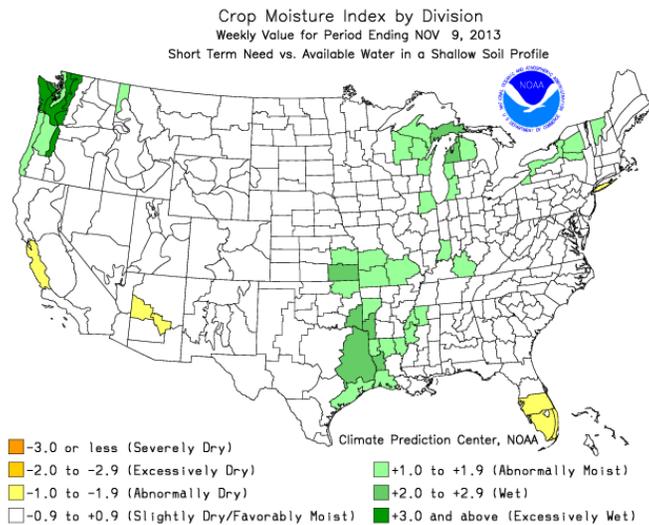
Less than five percent of Oklahoma is classified in Extreme Drought, virtually unchanged over the last couple months. About 15 percent of the state is considered to be experiencing Severe Drought, and almost 30 percent remains in Moderate Drought—both slight improvements from one month ago. However, a large portion of far southwestern Oklahoma (especially the area consisting of Harmon, Jackson and Tillman Counties) remains in Exceptional Drought, the worst category. And despite some recent relief, the Panhandle remains quite dry.

According to the latest Drought Outlook, drought is expected to persist or intensify throughout much of western and southern Oklahoma through January 2014.

CROP REPORT SUMMARY

November 12, 2013 – Planting of small grains was almost complete across the state and the emerged crops were rated in mostly good condition. Condition ratings of canola improved and were rated mostly good with 17 percent rated as excellent. Another widespread rain fell across Oklahoma early in the week, averaging just under an inch for the state but with the east once again receiving the most generous totals. Row crop harvest continued to progress. Sorghum and peanut harvesting was ahead of normal progress while soybean and cotton were just behind the five-year average. Temperatures averaged in the low 50s for the week, but much of the state dropped below freezing mid-week. Topsoil moisture conditions were rated 68 percent adequate to surplus and 32 percent short to very short. Subsoil moisture conditions improved slightly and were rated 51 percent adequate to surplus and 49 percent short to very short. There were 4.7 days suitable for fieldwork.

Cool-season forages continued to develop and condition ratings of pasture and range were rated mostly good to fair. Many operators were providing hay and supplementary feed for livestock. Livestock was rated mostly in good condition.



RESERVOIR STORAGE

November 12, 2013

