

Oklahoma Water Resources Bulletin & Summary of Current Conditions

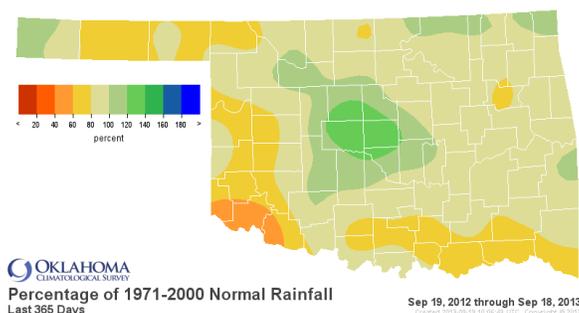
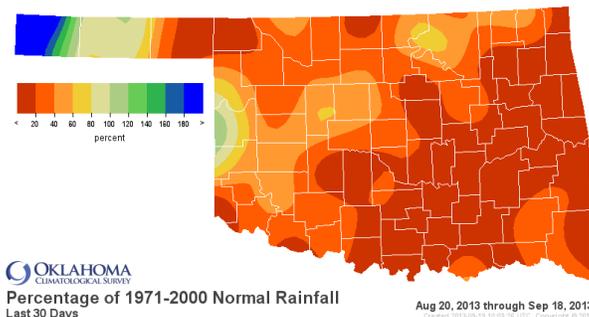


September 19, 2013

PRECIPITATION

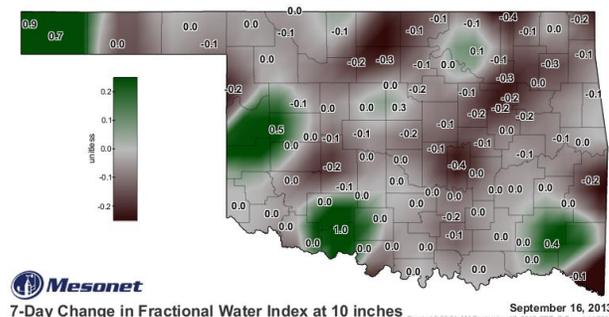
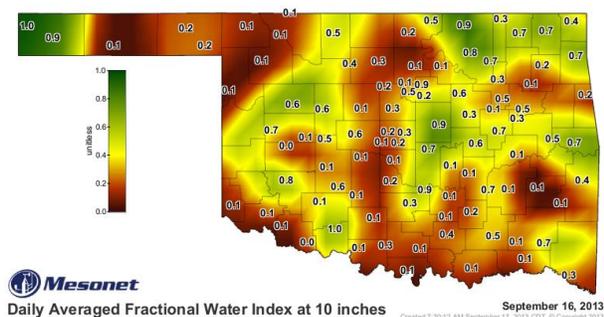
Statewide Precipitation

CLIMATE DIVISION	Last 30 Days August 20, 2013 – September 18, 2013				Last 365 Days September 19, 2012 – September 18, 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	1.86"	-0.24"	89%	45th wettest	17.14"	-3.96"	81%	28th driest
North Central	1.00"	-2.06"	33%	13th driest	28.26"	-3.39"	89%	44th driest
Northeast	1.07"	-3.03"	26%	5th driest	38.79"	-3.18"	92%	46th driest
West Central	1.49"	-1.38"	52%	24th driest	23.50"	-5.59"	81%	31st driest
Central	0.77"	-2.71"	22%	5th driest	40.44"	+2.45"	106%	18th wettest
East Central	0.33"	-3.75"	8%	1st driest	40.73"	-5.36"	88%	43rd driest
Southwest	0.96"	-2.11"	31%	16th driest	24.27"	-6.53"	79%	26th driest
South Central	0.29"	-3.30"	8%	3rd driest	33.58"	-7.38"	82%	25th driest
Southeast	0.69"	-3.10"	18%	2nd driest	42.59"	-8.35"	84%	22nd driest
Statewide	0.93"	-2.43"	28%	5th driest	32.48"	-4.21"	89%	38th driest



SOIL MOISTURE

Fractional Water Index¹ September 16, 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

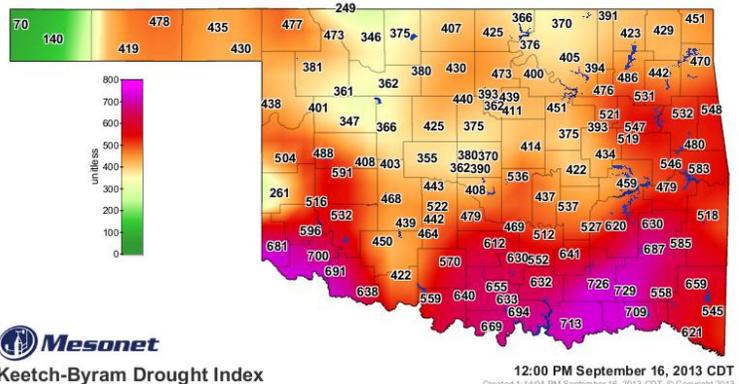
Palmer Drought Severity Index ¹					Standardized Precipitation Index ² Through August 2013			
CLIMATE DIVISION	CURRENT STATUS 9/14/2013	VALUE		CHANGE IN VALUE	3-MONTH	6-MONTH	12-MONTH	24-MONTH
		9/14	8/17					
Northwest	MODERATE DROUGHT	-2.03	-1.22	-0.81	VERY MOIST	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
North Central	MOIST SPELL	1.14	2.45	-1.31	MODERATELY MOIST	ABNORMALLY MOIST	NEAR NORMAL	NEAR NORMAL
Northeast	NEAR NORMAL	0.22	1.87	-1.65	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
West Central	MILD DROUGHT	-1.59	0.08	-1.67	ABNORMALLY MOIST	NEAR NORMAL	NEAR NORMAL	ABNORMALLY DRY
Central	MOIST SPELL	1.42	2.87	-1.45	EXTREMELY MOIST	EXTREMELY MOIST	MODERATELY MOIST	NEAR NORMAL
East Central	INCIPIENT DROUGHT	-0.69	0.97	-1.66	ABNORMALLY DRY	NEAR NORMAL	NEAR NORMAL	ABNORMALLY DRY
Southwest	MODERATE DROUGHT	-2.04	-0.66	-1.38	MODERATELY MOIST	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	MODERATE DROUGHT	-2.24	-0.87	-1.37	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southeast	MILD DROUGHT	-1.83	-0.24	-1.59	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL

- Five climate divisions, including all three in southern Oklahoma, are now classified as experiencing drought conditions, according to the PDSI. All regions have undergone a PDSI moisture decrease since August 17. According to the latest SPI, only two climate divisions (West Central and East Central) are experiencing near long-term dry conditions.

Keetch-Byram Drought Fire Index³

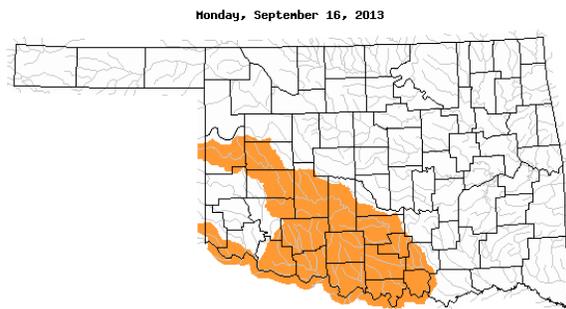
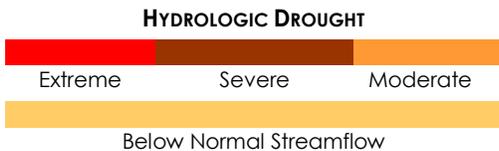
MESONET STATION	CLIMATE DIVISION	CURRENT VALUE 9/16/2013
Antlers	Southeast	729
Lane	South Central	726
Durant	South Central	713

- Stations currently at or above 600 (September 16) = 22
- Stations above 600 on August 19 = 1



STREAMFLOW CONDITIONS

September 16, 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.

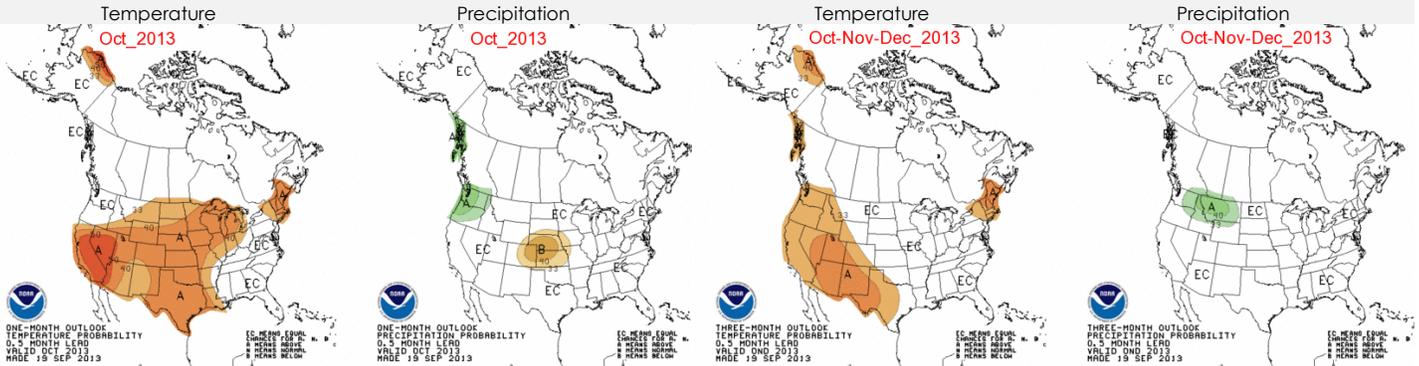
³ The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

WEATHER/DROUGHT FORECAST

Seasonal Outlook

October

October-November-December



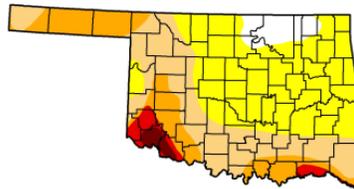
Regional Drought Summary & Outlook

U.S. Drought Monitor

September 17, 2013
Valid 7 a.m. EST

Oklahoma

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.52	94.48	49.14	21.09	4.58	1.46
Last Week (09/10/2013 map)	0.00	100.00	50.45	23.13	10.34	1.46
3 Months Ago (06/19/2013 map)	46.86	53.14	42.09	36.76	26.35	8.44
Start of Calendar Year (01/01/2013 map)	0.00	100.00	100.00	100.00	94.89	37.06
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	99.98	95.33	42.09
One Year Ago (09/11/2012 map)	0.00	100.00	100.00	99.89	94.68	39.66

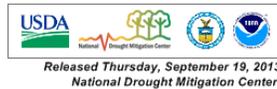


Intensity:

- 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.

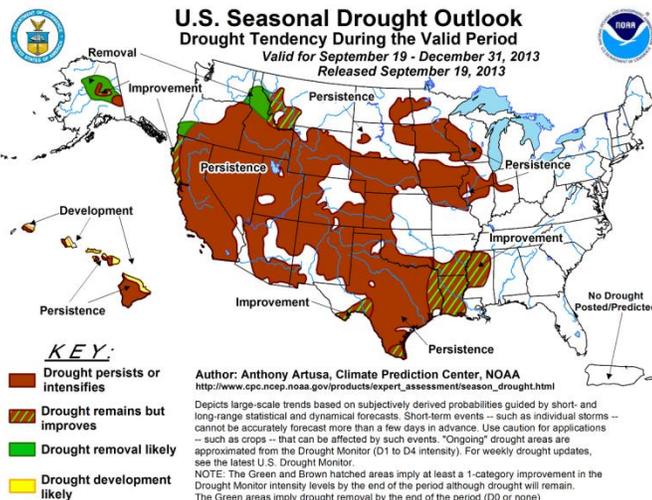
<http://droughtmonitor.unl.edu>



September 17—In the southern Plains, Oklahoma and Texas in particular, general improvements were made in the west while conditions deteriorated in the eastern portion of the region. In the Oklahoma Panhandle, copious monsoonal rains that inundated parts of the southwest and central Rockies also soaked the extreme western Panhandle (and southeastern Colorado) with over five inches of rain, enough for a 2-category improvement to D1. With lesser totals (1.5 to 3 inches) just to the east, a 1-category improvement was made to the rest of the Oklahoma Panhandle and in northwestern Oklahoma. Similarly, 2 to 4 inches of rain along the Kansas-Oklahoma border was enough to erase D0 in Kay and Osage Counties. However, little or no rain along the Red River Valley continued the dry trend in southern sections of the state as D2 and D3 expanded in extreme southern Oklahoma and across much of eastern Texas (and Louisiana). 30-day rainfall was under 25%, while 60- and 90-day precipitation hovered around 50%, creating 3-6 and 4-8 inch deficits, respectively.

Less than five percent of the state is now classified in Extreme Drought, a five percent improvement from last month. However, about 21 percent of the state is considered to be experiencing Severe Drought, and almost half the state remains in Moderate Drought. With some relief in the Panhandle, the worst and longest suffering area continues to be southwest Oklahoma. Elsewhere, drought and "abnormally dry" conditions continue in the west and are spreading southward and eastward.

According to the latest Drought Outlook, drought is expected to persist or intensify throughout a large portion of western and southern Oklahoma through December.



Author: Anthony Artusa, Climate Prediction Center, NOAA
http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html

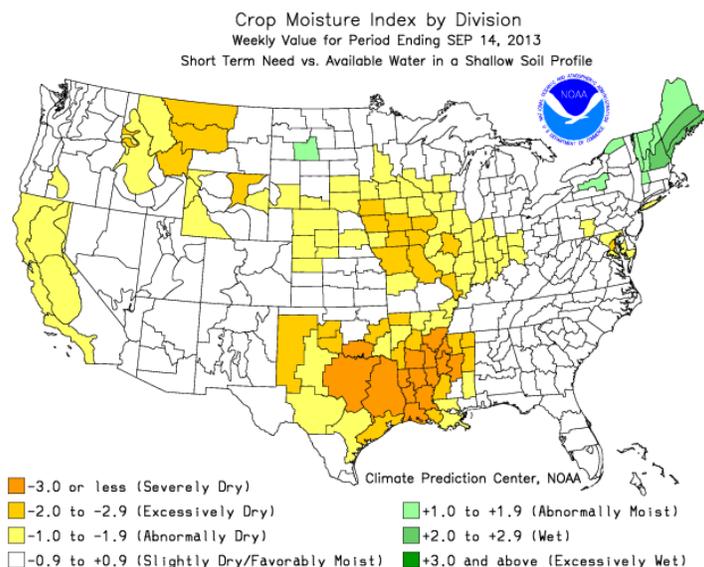
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- 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 Green and Brown hatched 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

September 16, 2013 – Seven percent of wheat was planted by the end of the week. Many farmers are waiting for moisture before beginning fall planting, while some are dusting in small grain crops. Most of the state received little to no rainfall over the past week. However, heavy rain fell in the Panhandle, specifically in Cimarron County and Texas County. Row crop development continued to progress with warm and dry conditions, and harvest of corn and sorghum was underway. Water availability for livestock was a concern for producers who were feeling the effects of worsening drought conditions, as were significant insect populations, such as crickets and flies. Topsoil moisture conditions were rated mostly short to very short, with 22 percent rated adequate. Subsoil moisture conditions were rated mostly adequate to short with 31 percent rated as adequate down from 37 percent the previous week. There were 6.6 days suitable for fieldwork.

Pasture and range conditions declined slightly but continued to be mostly good to fair. Summer heat and little rainfall led to the decline in some pasture and range land, as well as in stock pond levels. Livestock was rated mostly in good condition.



RESERVOIR STORAGE

September 9, 2013

