Oklahoma Water Resources Bulletin
& Summary of Current Conditions

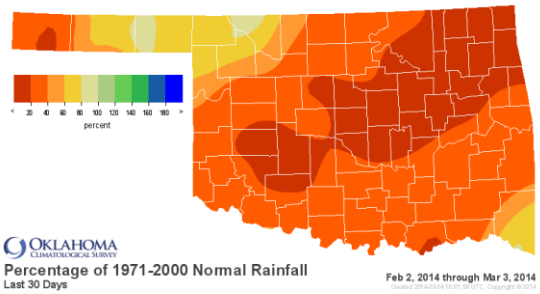
State of Oklahoma OWRB Water Resources Board the water agency

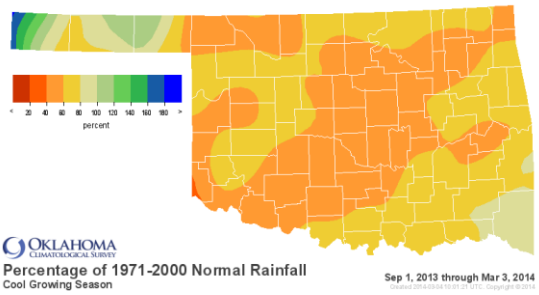
March 6, 2014

PRECIPITATION

Statewide Precipitation

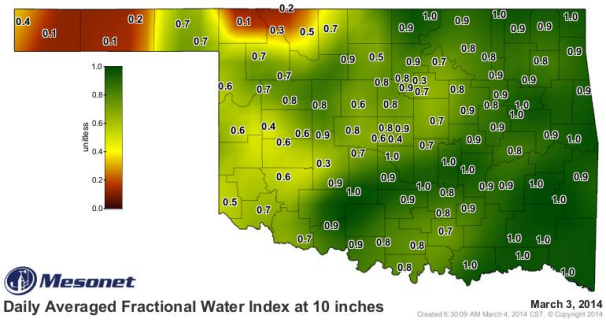
Climate Division	Last 30 Days (February 2, 2014 – March 3, 2014) Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921	Cool Growing Season (September 1, 2013 – March 3, 2014) Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921
Panhandle	0.44"	-0.33"	57%	38th driest	5.22"	-1.23"	81%	37th driest
North Central	0.59"	-0.85"	41%	29th driest	6.71"	-4.87"	58%	14th driest
Northeast	0.30"	-1.96"	13%	5th driest	11.05"	-7.17"	61%	16th driest
West Central	0.34"	-0.99"	26%	21st driest	6.62"	-4.09"	62%	20th driest
Central	0.36"	-1.74"	17%	8th driest	8.45"	-7.68"	52%	13th driest
East Central	0.56"	-2.17"	21%	5th driest	13.78"	-7.69"	64%	18th driest
Southwest	0.34"	-1.16"	22%	16th driest	6.48"	-5.61"	54%	11th driest
South Central	0.73"	-1.75"	29%	17th driest	11.29"	-7.39"	60%	17th driest
Southeast	1.44"	-2.02"	42%	15th driest	19.70"	-5.35"	79%	28th driest
Statewide	0.55"	-1.45"	28%	10th driest	9.76"	-5.78"	63%	13th driest

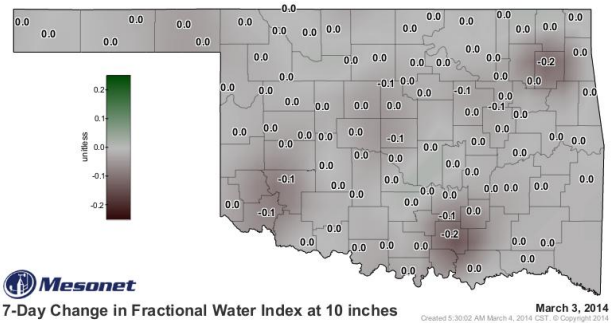




SOIL MOISTURE

Fractional Water Index[1]
March 3, 2014





[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]

Climate Division	Current Status 3/1/2014	Value 3/1	Value 2/8	Change In Value
Northwest	MODERATE DROUGHT	-2.06	-0.99	**-1.07**
North Central	NEAR NORMAL	0.29	0.65	**-0.36**
Northeast	INCIPIENT DROUGHT	-0.74	-0.16	**-0.58**
West Central	MILD DROUGHT	-1.71	-0.66	**-1.05**
Central	NEAR NORMAL	-0.33	0.46	**-0.79**
East Central	INCIPIENT DROUGHT	-0.83	-0.23	**-0.60**
Southwest	MODERATE DROUGHT	-2.55	-2.27	**-0.28**
South Central	NEAR NORMAL	-0.45	0.13	**-0.58**
Southeast	INCIPIENT DROUGHT	-0.93	0.17	**-1.10**

Standardized Precipitation Index[2] Through January 2014

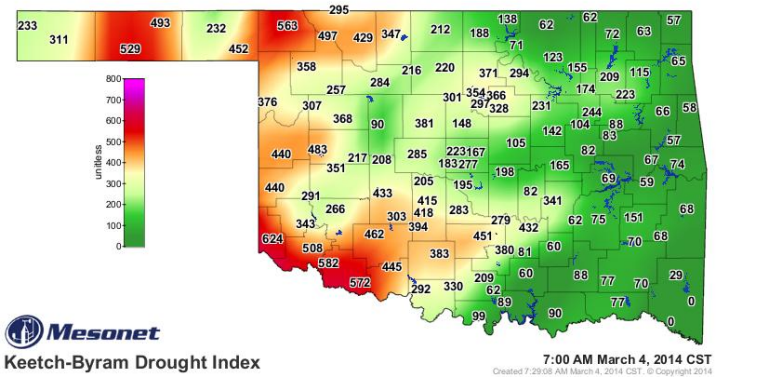
Climate Division	3-Month	6-Month	12-Month	24-Month
Northwest	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
North Central	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Northeast	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY
West Central	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY
Central	MODERATELY DRY	NEAR NORMAL	MODERATELY WET	NEAR NORMAL
East Central	VERY DRY	EXTREMELY DRY	NEAR NORMAL	VERY DRY
Southwest	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	MODERATELY DRY	MODERATELY DRY	NEAR NORMAL	MODERATELY DRY
Southeast	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY

- Six climate divisions are classified as experiencing drought (or incipient drought) conditions, according to the PDSI. All nine regions have undergone a PDSI moisture decrease since February 8.
- According to the latest SPI, eight climate divisions are experiencing longer-term dry conditions (through the last two years).

Keetch-Byram Drought Fire Index[3]

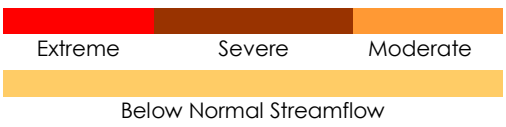
Mesonet Station	Climate Division	Current Value 3/4/2014
Hollis	Southwest	624
Tipton	Southwest	582
Grandfield	Southwest	572

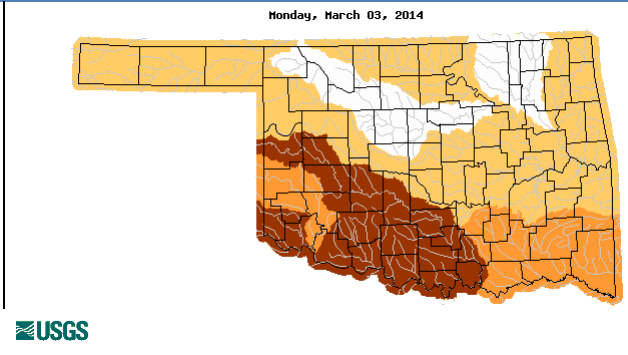
- Stations currently at or above 600 (March 4) = 1
- Stations above 600 on February 10 = 1



Streamflow Conditions

March 3, 2014





[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.*

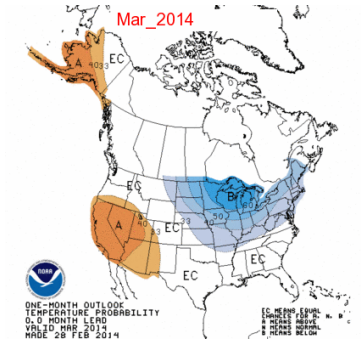
[3] *The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.*

WEATHER/DROUGHT FORECAST

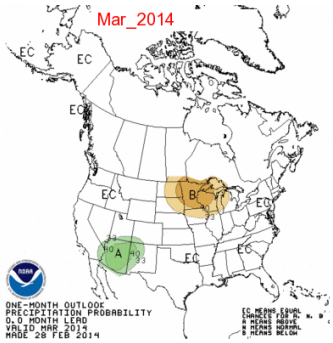
Seasonal Outlook

March

Temperature

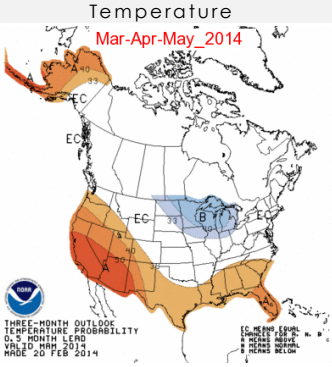


Precipitation

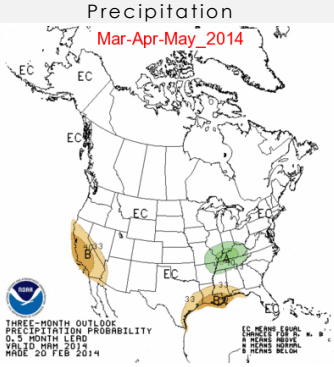


March-April-May

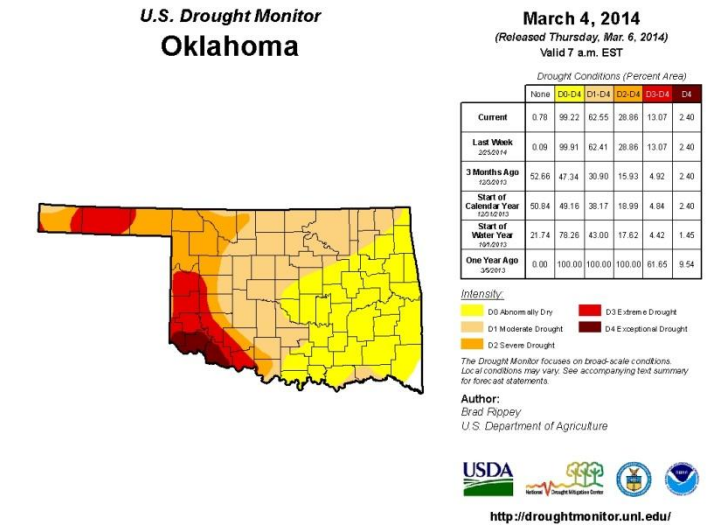
Temperature

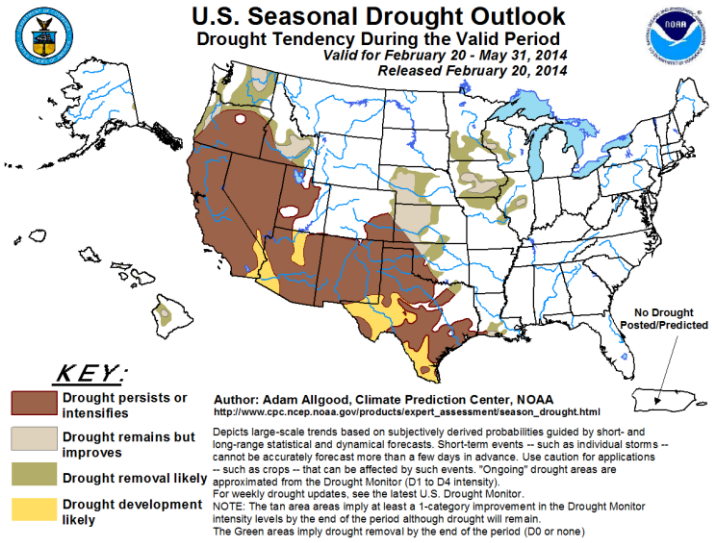


Precipitation



Regional Drought Summary & Outlook





March 4—According to the U.S. Drought Monitor, generally light, wintry precipitation prevented further drought expansion on the central Plains. On March 2, USDA reported that 31% of the winter wheat in Oklahoma was rated in very poor to poor condition, up from 24% a month earlier. Kansas and Nebraska wheat is in similar shape. When the wheat crop entered dormancy in late 2013, very poor to poor ratings were lower than 10% in all of those states. However, some of the perceived harm to the wheat may not have been explicitly caused by drought, but rather the cumulative effects of a harsh winter featuring wild temperature swings, occasional high winds, and exposure to extreme cold without the benefit of a protective snow cover. Drought was still a concern, though, especially in western sections of those states. In Texas, there were a variety of changes to the drought depiction, both improvement and deterioration. Recent precipitation was heaviest across southern and eastern Texas, where there were widespread changes for the better. General, slight deterioration was noted—with a few exceptions—across northern and western Texas.

Essentially the entire state—including about 63 percent of the land area classified in at least Moderate Drought—is suffering from categorical dryness as this extended multi-year episode spreads once again to the east. Western Oklahoma continues to experience the worst impacts as a large portion of far southwestern Oklahoma remains in Exceptional Drought, the worst category. Surrounding areas of southwest and west central Oklahoma, along with the central Panhandle region, remain in the Extreme Drought category.

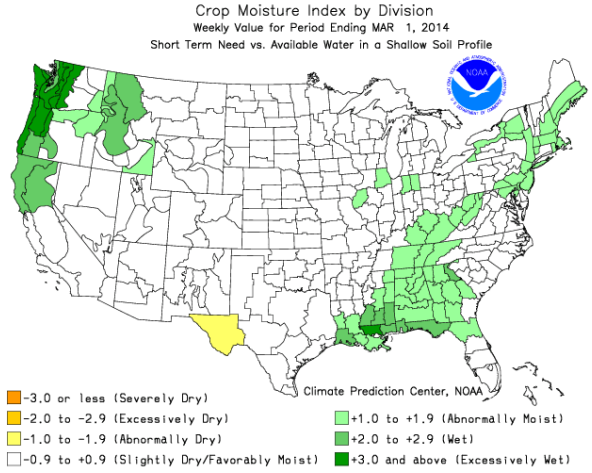
According to the latest Drought Outlook, drought is expected to persist or intensify throughout much of western Oklahoma and the Panhandle region through May, although conditions could improve in some northwestern and southern areas.

CROP REPORT SUMMARY

March 3, 2013 – The month began with cold temperatures and several bouts of snow, although it was insufficient to alleviate drought conditions. During the latter part of the month, high winds and worsening drought conditions contributed to extreme fire danger and overall damage to crops and topsoil moisture. Some canola was lost to winter kill. Small grain condition ratings and pasture conditions were mostly fair to poor for the month of February. Topsoil and subsoil moisture conditions were rated 87 percent and 83 percent short to very short, respectively. Thirteen percent of topsoil moisture and 17 percent of subsoil moisture were rated adequate and none were rated surplus.

Conditions of small grains and canola continued to decline over the past month and were rated mostly fair to poor. Forty-two percent of the wheat crop was being grazed, six points ahead of the five-year average, and 16 points more than during February 2013. Seventy percent of rye was reported as grazed, 33 points more than the previous year and 10 points higher than normal. Thirty percent of oats were being grazed, compared to the five-year average of 21 percent.

Pasture and range conditions were rated mostly fair to poor for the month of February.



RESERVOIR STORAGE

March 4, 2014