Oklahoma Water Resources Bulletin
& Summary of Current Conditions

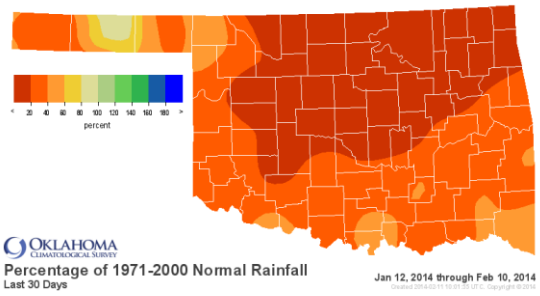
State of Oklahoma OWRB Water Resources Board the water agency

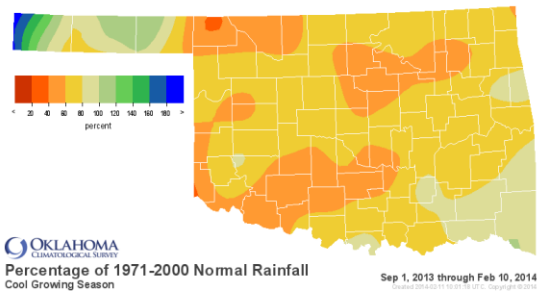
February 13, 2014

PRECIPITATION

Statewide Precipitation

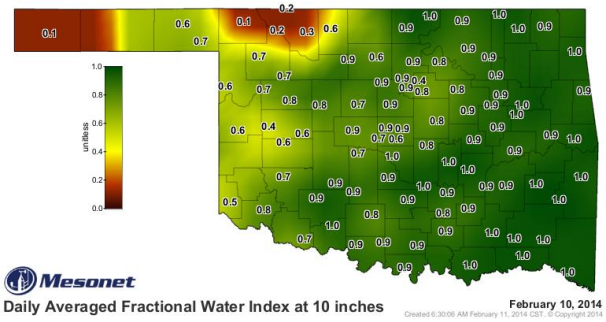
Climate Division	Last 30 Days (January 12, 2014 – February 10, 2014) Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921	Cool Growing Season (September 1, 2013 – February 10, 2014) Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921
Panhandle	0.25"	-0.32"	44%	37th driest	4.94"	-0.94"	84%	46th driest
North Central	0.11"	-0.92"	11%	7th driest	6.20"	-4.33"	59%	17th driest
Northeast	0.10"	-1.62"	6%	2nd driest	10.82"	-5.76"	65%	23rd driest
West Central	0.20"	-0.77"	21%	20th driest	6.47"	-3.27"	66%	24th driest
Central	0.21"	-1.34"	13%	6th driest	8.29"	-6.33"	57%	17th driest
East Central	0.53"	-1.72"	23%	5th driest	13.70"	-5.81"	70%	29th driest
Southwest	0.30"	-0.86"	26%	24th driest	6.45"	-4.57"	59%	17th driest
South Central	0.68"	-1.34"	34%	15th driest	11.23"	-5.68"	66%	21st driest
Southeast	1.10"	-1.83"	38%	12th driest	19.26"	-3.34"	85%	42nd driest
Statewide	0.37"	-1.20"	24%	6th driest	9.55"	-4.56"	68%	20th driest

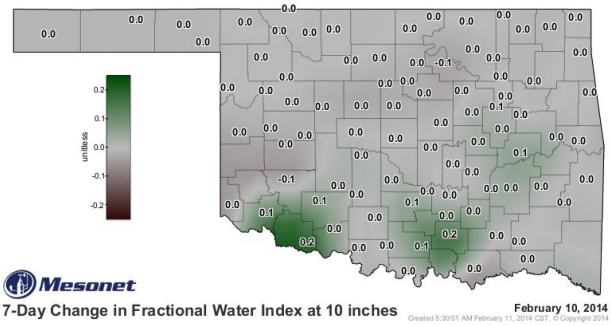




SOIL MOISTURE

Fractional Water Index[1]
February 10, 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] and Standardized Precipitation Index[2] Through January 2014

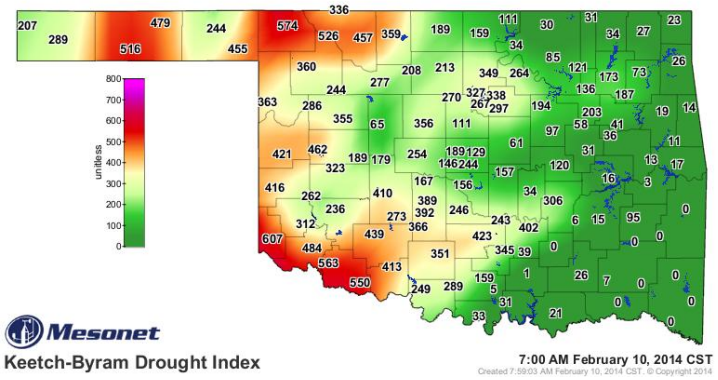
Climate Division	Current Status 2/8/2014	Value 2/8	Value 1/11	Change In Value	3-Month	6-Month	12-Month	24-Month
Northwest	INCIPIENT DROUGHT	-0.99	-0.98	**-0.01**	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
North Central	INCIPEINT MOIST SPELL	0.65	1.14	**-0.49**	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Northeast	NEAR NORMAL	-0.16	0.87	**-1.03**	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY
West Central	INCIPIENT DROUGHT	-0.66	-0.61	**-0.05**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY
Central	NEAR NORMAL	0.46	1.31	**-0.85**	MODERATELY DRY	NEAR NORMAL	MODERATELY WET	NEAR NORMAL
East Central	NEAR NORMAL	-0.23	0.81	**-1.04**	VERY DRY	EXTREMELY DRY	NEAR NORMAL	VERY DRY
Southwest	MODERATE DROUGHT	-2.27	-2.05	**-0.22**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	NEAR NORMAL	0.13	0.48	**-0.35**	MODERATELY DRY	MODERATELY DRY	NEAR NORMAL	MODERATELY DRY
Southeast	NEAR NORMAL	0.17	1.23	**-1.06**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY

- Three climate divisions—all in western Oklahoma—are classified as experiencing drought (or incipient drought) conditions, according to the PDSI. All nine regions have undergone a PDSI moisture decrease since January 11.
- According to the latest SPI, all nine 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 2/10/2014
Hollis	Southwest	607
Buffalo	Northwest	574
Tipton	Southwest	563

- Stations currently at or above 600 (February 10) = 1
- Stations above 600 on January 13 = 0



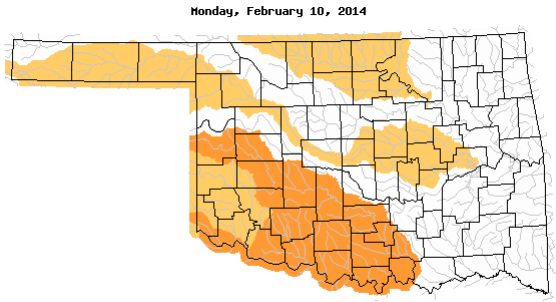
Streamflow Conditions

February 10, 2014

Hydrologic Drought

Extreme | Severe | Moderate

Below Normal Streamflow



[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.*

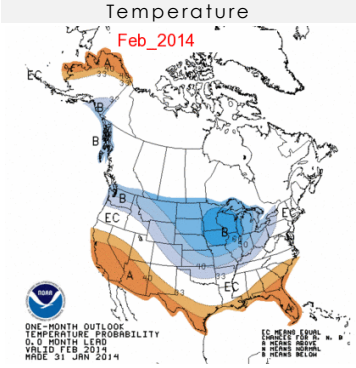
[3] *The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.*

WEATHER/DROUGHT FORECAST

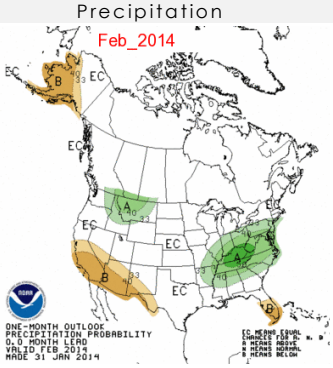
Seasonal Outlook

February

Temperature

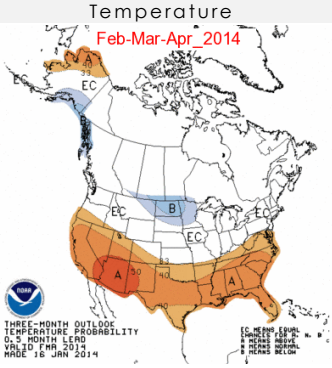


Precipitation

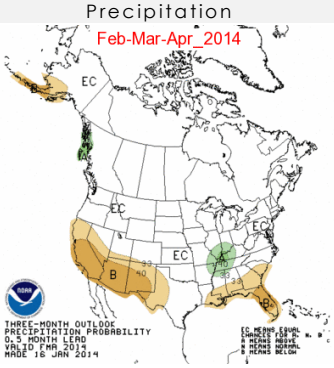


February-March-April

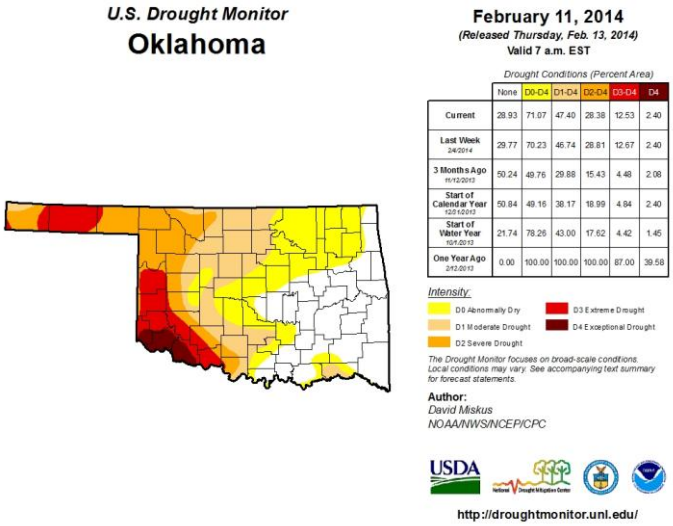
Temperature

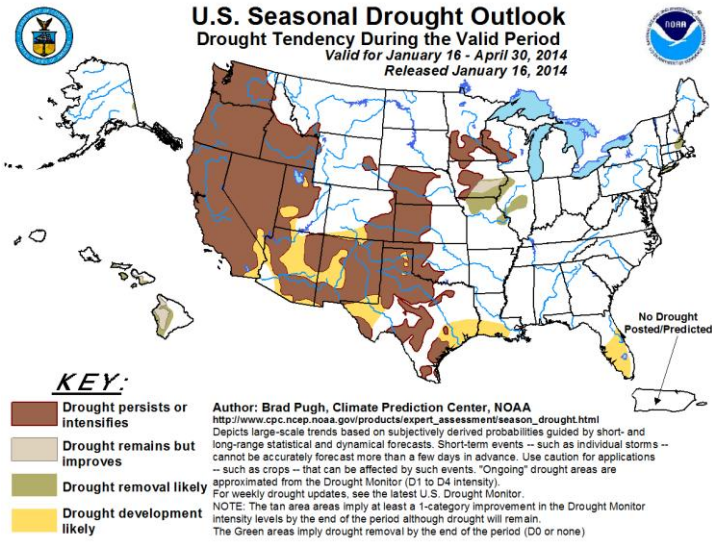


Precipitation



Regional Drought Summary & Outlook





February 11—According to the U.S. Drought Monitor, with the exception of light to moderate snows from the Oklahoma Panhandle northeastward across Kansas, southern Nebraska, and into Missouri and Iowa, and light rain in eastern Texas, little or no precipitation fell on the remainder of the central and southern Plains. Fortunately, normal precipitation totals are relatively low during the winter months, so accumulating deficits were also low. In central and eastern Kansas, where snow amounts were highest (liquid equivalent 0.5 to 1 inch), enough precipitation fell to produce 60-day surpluses from south central to northeastern Kansas, thus improving drought by one category in those areas. Elsewhere in Kansas, Nebraska, and western Oklahoma, the amounts were lighter or 60- to 90-day shortages still existed, so status-quo was kept. In Texas and southern Oklahoma with little precipitation occurring and normals low, most sections maintained their condition. A few areas, however, did require some deterioration as short-term dryness has begun to impact long-term conditions. This included southeastern Texas (D2 expansion), east-central Texas (D0 increase), southwest Texas (D3 merged), and D3-D4 increase eastward along the Red River where USGS flows are at 7-, 14-, and 28-day record lows.

More than twelve percent of Oklahoma is classified in Extreme Drought, signaling the continued evolution of worsening conditions over the last few months. More than 28 percent of the state is considered to be experiencing Severe Drought, and more than 47 percent remains in Moderate Drought as dryness increases in the west and spreads to the east. A large portion of far southwestern Oklahoma (especially the area consisting of Harmon, Jackson and Tillman Counties) remains in Exceptional Drought, the worst category. The Panhandle also remains quite dry.

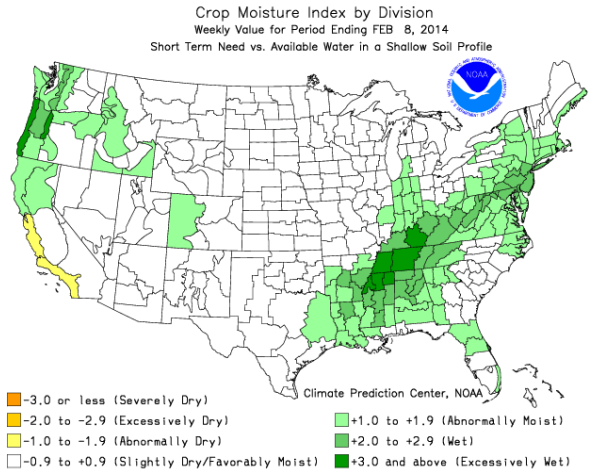
According to the latest Drought Outlook, drought is expected to persist or intensify throughout the general western half of Oklahoma through April.

Crop Report Summary

February 3, 2013 – Overall, January was dry and cold. High winds and low humidity sparked a few wildfires. Due to the limited amount of moisture, wheat grazing was inadequate. Some canola and winter wheat have also experienced freeze damage. Small grain condition ratings and pasture conditions were mostly good to fair for January. Topsoil and subsoil moisture conditions were both rated 72 percent short to very short, 28 percent adequate and none surplus.

Conditions of small grains and canola declined over the past month. Small grains and canola were rated mostly good to fair. Forty- one percent of the wheat crop was being grazed, six points ahead of the five-year average, and 19 points more than during January 2013. Sixty-nine percent of rye was reported as grazed, 38 points more than the previous year and 11 points higher than normal. Twenty-nine percent of oats were being grazed, compared to the five-year average of 19 percent.

Pasture and range conditions continued to be rated mostly good to fair. Grazing of small grains decreased this month with limited moisture conditions. Producers were also providing hay and supplementary feed to herds as needed. Livestock conditions continued to be rated mostly good to fair.



Reservoir Storage

February 11, 2014