Oklahoma Water Resources Bulletin & Summary of Current Conditions



February 9, 2012

PRECIPITATION

Statewide Precipitation										
	Cool Growing Season September 1, 2011 – February 6, 2012					Last 365 Days February 7, 2011 – February 6, 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	5.69"	-0.09"	98%	39th wettest	10.58"	-10.51"	50%	1st driest		
North Central	12.97"	+2.62"	125%	14th wettest	23.67"	-7.98"	75%	17th driest		
Northeast	13.81"	-2.48"	85%	42nd driest	36.10"	-5.85"	86%	32nd driest		
West Central	10.21"	+0.64"	107%	29th wettest	16.98"	-12.10"	58%	4th driest		
Central	13.42"	-0.92"	94%	34th wettest	27.02"	-10.96"	71%	15th driest		
East Central	18.71"	-0.43"	98%	37th wettest	42.88"	-3.19"	93%	36th driest		
Southwest	10.71"	-0.11"	99%	36th wettest	17.08"	-13.72"	55%	2nd driest		
South Central	16.54"	-0.04"	100%	36th wettest	27.09"	-13.85"	66%	7th driest		
Southeast	23.65"	+1.52"	107%	29th wettest	45.46"	-5.46"	89%	31st driest		
Statewide	13.84"	-0.00''	100%	29th wettest	27.32"	-9.36"	74%	11th driest		





Soil Moisture

Fractional Water Index¹ February 7, 2012



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.]

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DROUGHT INDICES									
Palm	ner Drought Sev	erity I	ndex ¹		Standardized Precipitation Index ² Through December 2011				
CLIMATE	CURRENT STATUS	VALUE		CHANGE	2 MONTH			10 Mouru	
DIVISION	2/4/2012	2/4	1/7	IN VALUE	3-MONIH	6-MONIH	9-MONIH	12-INONIH	
Northwest	INCIPIENT DROUGHT	-0.62	-1.82	1.20	NEAR NORMAL	MODERATELY DRY	EXTREMELY DRY	EXTREMELY DRY	
North Central	MODERATELY WET	2.72	0.55	2.17	MODERATELY WET	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY	
Northeast	NEAR NORMAL	0.11	-0.23	0.34	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	
West Central	NEAR NORMAL	0.19	-1.33	1.52	MODERATELY WET	NEAR NORMAL	VERY DRY	VERY DRY	
Central	NEAR NORMAL	-0.31	-1.43	1.12	MODERATELY WET	NEAR NORMAL	MODERATELY DRY	MODERATELY DRY	
East Central	MOIST SPELL	1.65	0.10	1.55	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY	
Southwest	MILD DROUGHT	-1.30	-1.69	0.39	VERY WET	NEAR NORMAL	VERY DRY	VERY DRY	
South Central	INCIPIENT WET SPELL	0.66	-1.84	2.50	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY	VERY DRY	
Southeast	MODERATELY WET	2.49	0.38	2.11	VERY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	

 Only one climate division (the Southwest) is currently experiencing drought conditions, according to the PDSI. No climate divisions have undergone a PDSI moisture decrease since January 7.

• Seven climate divisions are experiencing near long-term dry conditions, according to the SPI.

Keetch-Byram Drought Fire Index ³									
Mesonet Station	Climate Division	CURRENT VALUE 2/7/2012							
Hooker	Panhandle	666	• Stations currently at or above 600 (February 7) = 2 • Stations above 600 on January $0 = 1$						
Goodwell	Panhandle	608	• Stations above out of fandary $9 = 1$						
Tipton	Southwest	553							



¹ The Palmer Drought Severity Index, the first comprehensive drought index developed in the United States, is calculated based on 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.



Regional Drought Summary & Outlook

February 7, 2012

Valid 7

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U.S. Drought Monitor Oklahoma

Drought Conditions (Percent Area)							
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	
Current	24.91	75.09	66.53	41.82	18.57	3.78	
Last Week (01/31/2012 map)	24.91	75.09	66.53	49.80	26.62	3.78	
3 Months Ago (11/08/2011 map)	0.00	100.00	100.00	95.31	66.53	32.03	
Start of Calendar Year (12/27/2011 map)	14.83	85.17	78.76	50.55	27.48	3.33	
Start of Water Year (09/27/2011 map)	0.00	100.00	100.00	100.00	78.97	66.42	
One Year Ago (02/01/2011 map)	0.36	99.64	57.77	5.51	0.00	0.00	

D4 Drought - Exceptiona

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

http://droughtmonitor.unl.edu

D1 Drought - Moderat

D2 Drought - Severe

for forecast statements



USDA

February 7—The latest U.S. Drought Monitor reports that little or no precipitation was recorded from central Texas northward and westward through southwestern Oklahoma, the southern Texas Panhandle, and the High Plains. Other areas received light to moderate precipitation. Central and eastern Kansas and much of northern Oklahoma also received heavy precipitation. At least 2 inches fell on northcentral and northwestern Oklahoma east of the Panhandle. and on south-central Kansas, with a swath of 3 to 6 inches observed from near the northeastern Texas Panhandle northeastward through south-central Kansas. Conditions improved enough to justify 2-category drought classification reductions in this wettest area, generally to D1. Here, 6month totals are now above normal. Most other areas improved a single category to D1 or D2. Moderate rains were scattered across central and southern Texas, leading to a broken pattern of 1-category improvements, while a relatively dry week left conditions unchanged elsewhere.

According to the latest Drought Outlook (February 2), the ongoing La Niña event favors drought persistence and development for the next three months across the south. Much of this same area will also have enhanced odds for above normal temperatures. Despite early winter snowfall in Arizona and New Mexico, the odds for subnormal precipitation and above normal temperatures across the southwest are elevated in the monthly and seasonal outlooks. Therefore, persistence or development is forecasted across most of California, the Great Basin, southwest, and southern Plains. Some improvement is possible along the northern drought boundary in the central Great Plains.

CROP REPORT

January 30, 2012 (January Summary) – Scattered rains were seen across Oklahoma during January. A daily maximum rainfall record was set in McAlester, at 1.9 inches on January 10, breaking the old record of 0.62 inches set in 1954. A second daily record was set in Oklahoma City, at 1.52 inches on January 24, breaking the old record of 0.37 inches set in 1949.

Drought conditions continued around the state. The Drought Monitor indicated that 68 percent of the state was in a drought, as the Panhandle and much of the southwestern parts of the state continued to experience severe to exceptional drought conditions. Temperatures continued to be unseasonably warm for this time of year. The high temperatures ranged from 72 degrees in McAlester on January 20th to 79 degrees recorded in Mangum on January 16th. This unseasonable warm January along with the scattered rains have small grain crops off to a good start. Scattered rains have supplied much needed moisture for small grain grazing, which helped slow the feeding of hay. While the scattered rains have helped small grains, farm ponds and lakes have seen little relief from the drought. Some ranchers continued to haul water to livestock. Topsoil moisture conditions improved slightly with 53 percent rated adequate or surplus and 47 percent rated short to very short. Subsoil moisture conditions were rated mostly short to very short, though 27 percent of the state was rated as adequate.

Conditions have slipped slightly but small grain crops continued to be rated mostly good, while the canola condition rating remained mostly good to fair. Wheat grazed was at 39 percent, three points above the five year average. Rye grazed was at 67 percent, six percent above the five year average. Oats grazed was at 47 percent, 30 points above the five-year average.

Pasture and range conditions showed little improvement from December, with 72 percent rated poor to very poor. Ranchers were fortunate that more small grain grazing acres were available to replace the limited availability of cool season grasses. Livestock conditions were rated mostly in the good to fair range with 29 percent rated poor to very poor. Ranchers continued feeding hay and selling cattle with prices holding strong. Rains received over January were welcomed but have done little to replenish critically low ponds with many producers continuing to haul water.



RESERVOIR **S**TORAGE

12 major reservoirs are currently operating at less than full capacity (compared to 15 four weeks ago).
6 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs February 7, 2012									
	Normal Pool Elevation	Previous Elevation	Current Elevation	Change in Elevation	Current Flood Control Storage				
Lake or Reservoir	(feet)	(feet)	2///2012 (feet)	(feet)	(acre-feet)				
North Central	neen	(leen	(leen						
Fort Supply	2004.00	2001.77	2003.82	2.05	(297)				
Great Salt Plains	1125.00	1125.10	1126.37	1.27	14,195				
Kaw*	1011.90	1013.14	1015.37	2.23	60,404				
Northeast									
Birch	750.50	742.09	742.14	0.05	(7,711)				
Copan	710.00	710.77	711.25	0.48	5,749				
Fort Gibson	554.00	554.36	555.08	0.72	20,900				
Grand*	742.00	742.02	742.00	(0.02)	0				
Hudson	619.00	619.49	619.74	0.25	8,228				
Hulah	733.00	733.92	735.22	1.30	7,707				
Keystone	723.00	723.59	726.50	2.91	37,514				
Oologah	638.00	637.66	637.87	0.21	(3,675)				
Skiatook	714.00	701.14	700.94	(0.20)	(116,673)				
West Central									
Canton	1615.40	1603.82	1604.82	1.00	(65,001)				
Foss	1642.00	1635.53	1635.37	(0.16)	(40,998)				
Central									
Arcadia	1006.00	1006.35	1006.41	0.06	791				
Heyburn	761.50	761.55	761.91	0.36	272				
Thunderbird	1039.00	1033.92	1034.05	0.13	(27,597)				
East Central									
Eufaula	585.00	583.54	585.81	2.27	74,228				
Tenkiller	632.00	632.52	633.66	1.14	22,426				
Southwest									
Fort Cobb	1342.00	1338.37	1338.60	0.23	(11,991)				
Lugert-Altus	1559.00	1532.03	1531.92	(0.11)	(109,929)				
Tom Steed	1411.00	1404.27	1404.02	(0.25)	(38,364)				
South Central									
Arbuckle	872.00	867.47	868.61	1.14	(7,670)				
McGee Creek**	175.90	174.52	176.91	2.39	13,090				
Texoma*	615.30	613.14	615.86	2.72	37,767				
Waurika	951.40	945.62	945.43	(0.19)	(53,647)				
Southeast									
Broken Bow*	599.50	599.56	605.66	6.10	94,833				
Hugo*	404.50	406.37	411.61	5.24	111,477				
Pine Creek	433.00	433.31	438.67	5.36	19,260				
Sardis	599.00	599.31	600.05	0.74	14,363				
Wister	478.00	478.41	491.79	13.38	139,486				
* indicates seasonal pool operati	on **	elevation in meters		negative	numbers in red. parentheses				



Water Bulletin information/data courtesy of National Weather Service, Climate Prediction Center, Oklahoma Climatological Survey, State Department of Agriculture, Food, and Forestry, Agricultural Statistics Service, U.S. Army Corps of Engineers, U.S. Department of Agriculture/Forest Service, U.S. Geological Survey, Western Drought Coordination Council, and National Drought Mitigation Center. For more information, visit www.owrb.ok.gov and www.mesonet.org.