Oklahoma Water Resources Bulletin & Summary of Current Conditions



March 6, 2008

PRECIPITATION

Preliminary Statewide Precipitation								
	Cool Growing Season September 1, 2007—March 4, 2008				Calendar Year January 1—March 4, 2008			
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	3.39"	-3.11"	52%	7th driest	0.72"	-0.66"	52%	26th driest
North Central	10.58"	-1.09"	91%	43rd wettest	2.67"	+0.18"	107%	29th wettest
Northeast	17.65"	-0.68"	96%	34th wettest	5.19"	+1.17"	129%	17th wettest
West Central	8.90"	-1.89"	82%	37th driest	2.47"	+0.14"	106%	28th wettest
Central	12.94"	-3.30"	80%	36th driest	4.17"	+0.52"	114%	21st wettest
East Central	18.96"	-2.64"	88%	40th driest	6.23"	+1.14"	122%	29th wettest
Southwest	7.89"	-4.27"	65%	17th driest	2.13"	-0.55"	80%	35th driest
South Central	10.90"	-7.89"	58%	14th driest	4.01"	-0.55"	88%	41st driest
Southeast	22.13"	-3.07"	88%	36th driest	8.38"	+1.85"	128%	22nd wettest
Statewide	12.51"	-3.14"	80%	28th driest	3.95"	+0.34"	109%	29th wettest





SOIL MOISTURE

Fractional Water Index¹ March 4, 2008





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. Specifically, 1.0 to 0.8 equals Enhanced Growth, 0.8 to 0.5 equals Limited Growth, 0.5 to 0.3 equals Plants Wilting, 0.3 to 0.1 equals Plants Dying, and less than 0.1 equals Barren Soil.

DROUGHT INDICES									
Palmer Drought Severity Index ¹					Standardized Precipitation Index ² Through February 2008				
Climate Division (#)	Current Status 3/1/2008	VA	LUE 2/2	Change In Value	3-Month	6-Month	9-Month	12-Month	
Northwest (1)	NEAR NORMAL	-0.18	-0.28	0.10	NEAR NORMAL	MODERATELY DRY	MODERATELY DRY	NEAR NORMAL	
North Central (2)	VERY MOIST SPELL	3.58	3.09	0.49	NEAR NORMAL	NEAR NORMAL	VERY WET	EXTREMELY WET	
Northeast (3)	UNUSUAL MOIST SPELL	2.11	1.49	0.62	NEAR NORMAL	NEAR NORMAL	MODERATELY WET	VERY WET	
West Central (4)	VERY MOIST SPELL	3.74	3.12	0.62	NEAR NORMAL	NEAR NORMAL	EXTREMELY WET	EXTREMELY WET	
Central (5)	VERY MOIST SPELL	3.92	3.64	0.28	NEAR NORMAL	NEAR NORMAL	EXTREMELY WET	EXTREMELY WET	
East Central (6)	MOIST SPELL	1.45	0.62	0.83	MODERATELY DRY	NEAR NORMAL	MODERATELY WET	NEAR NORMAL	
Southwest (7)	UNUSUAL MOIST SPELL	2.53	2.18	0.35	NEAR NORMAL	NEAR NORMAL	VERY WET	VERY WET	
South Central (8)	NEAR NORMAL	0.05	-0.27	0.32	MODERATELY DRY	VERY DRY	NEAR NORMAL	MODERATELY WET	
Southeast (9)	MOIST SPELL	1.67	0.86	0.81	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	

• No climate divisions are currently experiencing drought conditions, according to the PDSI.

• No climate divisions have undergone PDSI moisture decreases since February 2.

• Four climate divisions are experiencing dry conditions, according to the SPI.



Keetch-Byram Drought Fire Index³

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.

Weather/Drought Forecast

8- to 14-Day Outlook March 12-18, 2008



U.S. Drought Monitor

March 4, 2008



U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period Valid March 6, 2008 - May, 2008 Released March 6. 2008 im prove \cap Develop Develor Persis KEY:)rought to persist o ntensify Persist Drought ongo improvement ing, some 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 to recast more than a few days in adva Use calcion for applications - such as copps - that can be affected by such events. To going'd dought areas are approximate form the Drought Monitor (b) to D4 interastly). For weekly drought updates, see the latest U.S. Drought Monitor, NOTE: the green improv areas limply at least a 1-catogory in provement in the Drought Monitor (binersty) leves. Drought likely to imp impacts ease Drought developmen likely imply at least a 1-category improvement in the D not necessarily imply drought elimination.

Regional Drought Summary & Outlook:

8-14 DAY OUTLOOK PRECIPITATION PROBABILITY HADE 4 HAR 2008 VALID HAR 12 - 18. 2008

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March 4—Dry conditions continued to plague the northern Plains over the last several months. In the south, dryness continues across central and west Texas. After an eight-month period of wet weather in 2007, the end of 2007 and start of 2008 has been very dry over much of the western half of Texas. D2 was expanded north and west this week and D1 conditions were pushed to the west as well. D0 was introduced into the Big Bend region as well this week. D0 was improved slightly in south central Oklahoma as it was on the western fringe of heavy rain and snow this week. Places east of the D0 area received more than 4 inches of rain, with 4 to 6 inches of snow reported on top of that.

Precipitation

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According to the latest Drought Outlook, the Southeastern drought region should continue to see improvement, with the best odds for relief extending across the northern part of the drought area as well as along the coast. Farther west, drought is forecast to persist over central Texas and in the western Oklahoma Panhandle region, with the odds still favoring expansion into west Texas and eastern New Mexico. Forecasts for drier weather have led to the Outlook showing persisting drought over southern California and southern Nevada, although deep mountain snow pack will boost water supplies this spring. To the north, improvement is anticipated over the northern Great Basin, while more limited improvement is forecast for the northern High Plains. Little change is expected over the far western Dakotas, but the odds for improvement increase to the east into Minnesota.

CROP REPORT

March 3—Soil moisture conditions in some areas improved with substantial rainfall throughout the month of February. Although a burn ban is in effect for only a few Panhandle counties, producers across the state remained wary of wildfire dangers. Recent strong winds have increased dryness and chances for wildfires across Oklahoma. Topsoil moisture increased during the month with 72 percent rated in the adequate to surplus range. Subsoil moisture levels also increased with 69 percent rated in the adequate to surplus range.

The condition of all small grain crops was mostly in the good to fair range. Wheat development was thought to be behind normal in many areas, possibly due to low soil temperatures. Producers continued to top-dress and spray for greenbugs when the weather would allow. Winter wheat grazed was at 25 percent, 23 points behind normal. Spring growth and progress for oats and rye were also thought to be behind normal. Rye grazed was at 55 percent, 20 points behind normal and oats grazed was at eight percent, 21 points behind the five-year average.

Seventy-six percent of pastures were in the good to fair range. Cool season grass conditions improved in some parts of the state over the past month. In most areas, grasses are being pastured. Some cattle producers are considering alternative pasture fertilizing options due to increased fertilizer costs.

Livestock remained in mostly good to fair condition. Livestock marketings were average. Temperatures continued to fluctuate from one extreme to the other making it tough on cattle operators. With an abundant amount of hay on hand, many cattle producers continued to provide hay to their herds.



RESERVOIR **S**TORAGE

- 6 reservoirs are currently operating at less than full capacity (compared to 15 last month).
- 5 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs									
	March 5, 2008								
	Normal Pool	Previous	Current	Change in	Current Flood				
	Elevation	Elevation	Elevation	Elevation	Control Storage				
Lake or Reservoir	(f i)	02/05/2008	03/05/2008	(51)					
North Control	(feet)	(leet)	(feet)	(feet)	(acre-reet)				
Fort Supply	2004.00	2004.52	2004 12	(0,40)	225				
Great Salt Plains	1125.00	1125.36	1125 43	0.07	3,609				
Kaw*	1008.60	1013.70	1010.88	(2.82)	37.770				
Northeast	1000100	1010170	1010100	(2.02)	0,,,,,				
Birch	750.50	750.48	752.26	1.78	2,069				
Copan	710.00	710.71	712.48	1.77	14,078				
Fort Gibson	554.00	556.85	558.10	1.25	84,039				
Grand	745.00	742.09	746.46	4.37	69,081				
Hudson	619.00	619.50	622.28	2.78	37,584				
Hulah	733.00	733.45	737.22	3.77	22,620				
Keystone	723.00	722.90	722.90	0.00	(2,190)				
Oologah	636.00	638.33	640.37	2.04	135,638				
Skiatook	714.00	714.00	715.45	1.45	15,863				
West Central									
Canton	1615.40	1615.65	1615.84	0.19	3,492				
Foss	1642.00	1641.91	1641.48	(0.43)	(3,474)				
Central									
Arcadia	1006.00	1005.81	1007.12	1.31	2,090				
Heyburn	761.50	761.77	762.59	0.82	1,012				
Thunderbird	1039.00	1039.48	1039.92	0.44	5,612				
East Central									
Eufaula*	585.00	583.60	587.21	3.61	219,241				
Tenkiller	632.00	631.08	637.97	6.89	80,183				
Southwest									
Fort Cobb	1342.00	1343.01	1342.92	(0.09)	3,582				
Lugert-Altus	1559.00	1553.17	1554.45	1.28	(26,582)				
Tom Steed	1411.00	1409.90	1410.27	0.37	(4,578)				
South Central									
Arbuckle	872.00	8/1.28	8/1.9/	0.69	(70)				
McGee Creek**	1/5.90	1/5.66	1//.16	1.50	16,505				
lexoma*	615.00	614.47	614.45	(0.02)	(37,759)				
Waurika^	951.40	952.05	952.09	0.04	7,028				
Southeast	500 50	504.00	(02.02	0.41	F2 007				
BLOKEN BOW^	599.50	594.82	603.23	8.41	53,907				
Hugo" Dipo Crook*	404.50	404.44	411.32	6.88	130,704				
Pine Creek"	438.00	438.32	447.48	9.16	45,780				
Saluis	599.00	599.44	601.58	2.14	36,720				
vvister	478.00	478.30	493.27	14.97	180,426				

* indicates seasonal pool operation

** 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** <u>www.owrb.state.ok.us</u> and <u>http://www.mesonet.ou.edu/public</u>.