Oklahoma Water Resources Bulletin & Summary of Current Conditions



June 13, 2007

PRECIPITATION

Preliminary Statewide Precipitation								
	Warm Growing Season March 1—June 11, 2007				Water Year October 1, 2006— June 11, 2007			
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	8.04"	+0.11"	101%	31st wettest	13.34"	+1.01"	108%	22nd wettest
North Central	16.74"	+4.93"	142%	5th wettest	22.34"	+2.35"	112%	18th wettest
Northeast	17.91"	+3.07"	121%	17th wettest	28.05"	+0.12"	100%	29th wettest
West Central	16.46"	+5.15"	145%	5th wettest	24.27"	+5.50"	129%	9th wettest
Central	19.20"	+5.12"	136%	6th wettest	29.08"	+3.29"	113%	16th wettest
East Central	11.63"	-4.46"	72%	19th driest	30.51"	-1.69"	95%	38th wettest
Southwest	14.47"	+3.04"	127%	13th wettest	24.45"	+4.54"	123%	12th wettest
South Central	15.44"	+0.83"	106%	31st wettest	30.57"	+1.97"	107%	22nd wettest
Southeast	13.60"	-3.45"	80%	23rd driest	36.94"	-0.16"	100%	40th wettest
Statewide	15.02"	+1.78"	113%	20th wettest	26.53"	+1.86"	108%	21st wettest



SOIL MOISTURE

Fractional Water Index¹ June 11, 2007

25 CM (~10 INCHES)



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								
Palm	er Drought Sevei	dex ¹		Standardized Precipitation Index ² Through May 2007				
CLIMATE	CURRENT STATUS	VALUE		CHANGE	3-Month	6-Month	9-MONTH	12-Month
DIVISION (#)	6/9/2007	6/9	5/12	IN VALUE	•	•	,	
Northwest (1)	VERY MOIST SPELL	3.80	3.76	0.04	NEAR NORMAL	VERY WET	VERY WET	MODERATELY WET
North Central (2)	UNUSUAL MOIST SPELL	2.95	3.24	-0.29	VERY WET	VERY WET	NEAR NORMAL	NEAR NORMAL
Northeast (3)	MOIST SPELL	1.28	2.16	-0.88	NEAR NORMAL	MODERATELY WET	NEAR NORMAL	NEAR NORMAL
West Central (4)	EXTREME MOIST SPELL	4.05	4.89	-0.84	VERY WET	VERY WET	VERY WET	MODERATELY WET
Central (5)	UNUSUAL MOIST SPELL	2.45	3.26	-0.81	VERY WET	VERY WET	MODERATELY WET	MODERATELY WET
East Central (6)	INCIPIENT DROUGHT	-0.84	0.79	-1.63	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southwest (7)	VERY MOIST SPELL	3.19	4.12	-0.93	MODERATELY WET	MODERATELY WET	MODERATELY WET	NEAR NORMAL
South Central (8)	MOIST SPELL	1.83	2.22	-0.39	NEAR NORMAL	MODERATELY WET	MODERATELY WET	NEAR NORMAL
Southeast (9)	INCIPIENT DROUGHT	-0.81	0.13	-0.94	NEAR NORMAL	NEAR NORMAL	MODERATELY WET	NEAR NORMAL

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

• Eight climate divisions have undergone PDSI moisture decreases since May 12.

Keetch-Byram Drought Fire Index³

Mesonet Station	COUNTY	CLIMATE DIVISION	CURRENT VALUE 6/11/2007
Broken Bow Wister Stigler	McCurtain LeFlore Haskell	Southeast Southeast East Central	309 285 275
Stations curiStations abo	rently above ove 600 on M	600 (June 11) = 0 lay 14 = 0	

Climatological Survey as of Jun 11, 2007

opynght (c) 2007 Oklahoma Climatological Survey. All nghtu reu

Statewide Wildfire Preparedness

On December 4, 2006 Governor Brad Henry cancelled the Ban on Outdoor Burning for all counties in Oklahoma. However, citizens are encouraged to use caution. Dry, grassy fuels will ignite easily when the humidity is low and the temperature and winds are high.



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 Forecast June 18-24, 2007



U.S. Drought Monitor Oklahoma

June 12, 2007

Author: Rich Tinker, Cl



http://drought.unl.edu/dm





8-14 DAY OUTLOOK PRCP PROBABILITY MADE 10 JUN 2007

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June 12—In the broad area of dryness and drought that has come to encompass a large section of the southern and eastern U.S., heavy rains brought relief to some western, northern, and southeastern fringes of the area but conditions persisted or intensified elsewhere. Moderate to heavy rains fell on scattered sections of southwestern Georgia, southeastern Alabama, and Louisiana as well as isolated sites elsewhere (primarily from the Appalachians eastward), but only light rain was reported across the majority of the region. As a result, D0 expanded northward to include central and southern Illinois, and the coverage of each drought intensity level from D1 through D4 expanded (primarily northward and southward) from the central Gulf Coast northward through most of the Ohio Valley.

Precipitation

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According to the latest Drought Outlook, some improvement should occur to the severe/extreme drought affecting the Gulf Coast and Southeast. With rainfall deficits exceeding 12 inches in many locations of the Southeast, drought elimination is highly dependent on tropical storm activity. The greatest likelihood of improvement exists over the Carolinas and southeast Georgia. Improvement is also expected for Florida's peninsula. Although periods of beneficial showers are expected, the ongoing drought will likely persist across north Alabama, northwest Georgia, Tennessee, and Kentucky. Although drought development is not forecast for the western and central Corn Belt, a trend towards dry, hot weather may occur by late summer.

CROP REPORT

June 11—Temperatures warmed up the first part of last week across Oklahoma, exceeding 90 degrees in many areas. However, a cold front moved through the state this past Thursday, dropping temperatures to the high 50s overnight. Weather conditions throughout the week were much more favorable for agricultural activities and farmers took full advantage. Topsoil moisture was rated 95 percent surplus to adequate, compared to 19 percent at this time in 2006. Subsoil moisture was rated 90 percent surplus to adequate, compared to just 16 percent last year. There were 5.1 days suitable for fieldwork.

Improved weather conditions allowed wheat harvest to continue across much of Oklahoma until the weekend, when spotty showers slowed harvesting operations in many areas. There were reports of storm damage to isolated wheat fields. One-fourth of the wheat crop had been harvested by Sunday, a 22 point jump from the previous week but 20 points behind the five-year average. Yields from some of the harvested wheat fields were below expectations, a likely result of the Easter freeze, excess moisture, disease, and insect pressures. Farmers had 14 percent of oats and 21 percent of rye harvested by the end of the week, both behind normal.

Field work resumed in many areas last week as farmers were eager to catch up on seedbed preparations and planting activities. Producers had nearly half of the state's sorghum acres planted by week's end and 36 percent of the crop had emerged. Peanut growers had the majority of the crop planted by the end of last week and 93 percent had emerged. Sixty-nine percent of the cotton acreage had been planted and 59 percent had emerged, both behind the five-year average.

Improved weather conditions allowed farmers to resume hay baling. Producers had made the first cutting on 96 percent of alfalfa and 58 percent of other hay. The second cutting of alfalfa, at 40 percent, was 10 points behind the five-year average. Alfalfa and other hay conditions remained mostly in the good to fair range. Eighty-nine percent of watermelons had developed runners and 43 percent were setting fruit. Peaches were rated in the mostly good to fair range with an average fruit set.

Livestock conditions improved last week and were rated mostly in the excellent to good range. Livestock marketings were average last week. Pasture conditions were rated mostly in the excellent to good range.



Crop Moisture Index by Division

Weekly Value for Period Ending 9 JUN 2007

RESERVOIR **S**TORAGE

- 0.2 percent increase in total storage (about 100%) from that recorded on May 14 (99.8%)
- 22 reservoirs have experienced lake level decreases
- 1 reservoir is currently operating at less than full capacity (compared to 3 four weeks ago)
- 0 reservoirs are below 80 percent of their total conservation storage

Storage in Selected Oklahoma Lakes & Reservoirs						
Climate Division Lake or Reservoir	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Conservation Storage			
North Central	· · ·	· · · ·				
Fort Supply	13,900	13,900	100.0			
Great Salt Plains	31,420	31,420	100.0			
Kaw*	459,850	459,850	100.0			
Regional Totals/Averages	505,170	505,170	100.0			
Northeast						
Birch	19,225	19,225	100.0			
Copan	34,634	34,634	100.0			
Fort Gibson	365,200	365,200	100.0			
Grand	1,672,000	1,672,000	100.0			
Hudson	200,300	200,300	100.0			
Hulah	22,565	22,565	100.0			
Keystone	510,059	510,059	100.0			
Oologah	552,219	552,219	100.0			
Skiatook	322,700	322,700	100.0			
Regional Totals/Averages	3,698,902	3,698,902	100.0			
West Central						
Canton	111,310	111,310	100.0			
Foss	165,480	165,480	100.0			
Regional Totals/Averages	276,790	276,790	100.0			
Central						
Arcadia	27,520	27,520	100.0			
Heyburn	7,105	7,105	100.0			
Thunderbird	119,600	119,600	100.0			
Regional Totals/Averages	154,225	154,225	100.0			
East Central						
Eufaula*	2,529,143	2,529,143	100.0			
Tenkiller	654,100	654,100	100.0			
Regional Totals/Averages	3,183,243	3,183,243	100.0			
Southwest	-,,	., .,				
Fort Cobb	80,010	80,010	100.0			
Lugert-Altus	132,830	132,830	100.0			
Tom Steed	88,970	86,650	97.4			
Regional Totals/Averages	301,810	299,490	99.2			
South Central						
Arbuckle	72,400	72,400	100.0			
McGee Creek	113,930	113,930	100.0			
Texoma*	2,742,146	2,742,146	100.0			
Waurika*	190,200	190,200	100.0			
Regional Totals/Averages	3,118,676	3,118,676	100.0			
Southeast			-			
Broken Bow*	958,180	958,180	100.0			
Hugo*	198,067	198,067	100.0			
Pine Creek*	71,120	71,120	100.0			
Sardis	274,330	274,330	100.0			
Wister	60,162	60,162	100.0			
Regional Totals/Averages	1,561,859	1.561.859	100.0			
State Totals	12,800,675	12,798,355	100.0			



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>.