

Oklahoma Drought Update

Oklahoma Climatological Survey (OCS)

Climate Information Group

September 30th, 2006

This document is provided to update Oklahoma's citizens and decision-makers with weather and climate information related to the state's ongoing drought and any drought-related wildfires. The data summarized here are updated daily at the Oklahoma Climatological Survey Drought Update: <http://climate.ocs.ou.edu/drought>.

Summary

Data from the Oklahoma Mesonet and OCS archives indicate that the state is enduring drought on multiple timescales. The drought has a historic long-term face (seasons to years) across almost all of Oklahoma, and re-emerging short-term impacts (weeks to months) in the north and west. The southeast and panhandle felt drought or near-drought conditions since 2002, with a distinct southeastern intensification in spring 2005. Drought expanded northward in summer 2005 to fill the state's eastern third. Severe impacts then advanced westward during the subsequent winter. April rains eased immediate problems, but May 2006 exacerbated long-term drought conditions. A profound intensification of drought during summer 2006 plagued the southern third of the state. Dryness was accompanied by record or near-record heat on multiple mid-summer afternoons.

Historical Rank of the Current Drought

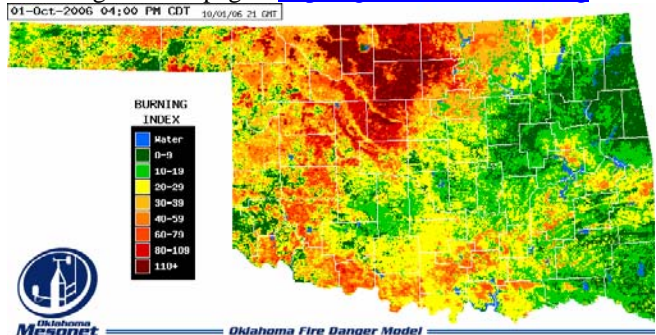
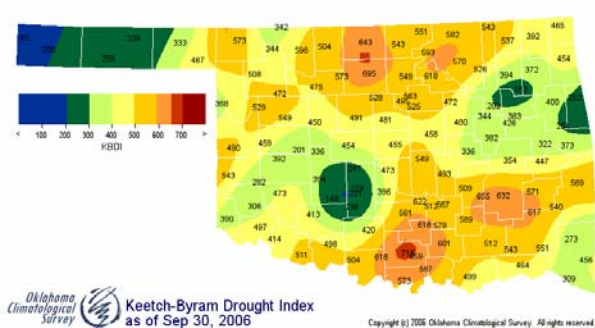
These historically rank the current rainfall statistics on seven different timescales. Each is compared to a history made up of the equivalent time periods since 1921. For example: a rank of "9th" for southwest Oklahoma's 180-day rainfall indicates that the 180-day total (Apr 5th through Oct 1st, 2006) is the 9th-driest such period of the 86 on record.

OK Region	Rank by Time Scale: For Periods Ending October 1 st						
	30-Day	60-Day	90-Day	120-Day	180-Day	365-Day	Two-Year
1-Panhandle	20 th	66 th	66 th	48 th	22 nd	14 th	25 th
2-N. Central	9 th	20 th	21 st	12 th	6 th	3 rd	18 th
3-Northeast	18 th	26 th	33 rd	14 th	22 nd	4 th	10 th
4-W. Central	25 th	42 nd	32 nd	33 rd	17 th	7 th	38 th
5-Central	24 th	38 th	35 th	24 th	12 th	2 nd	17 th
6-E. Central	39 th	35 th	31 st	15 th	18 th	2 nd	9 th
7-Southwest	45 th	52 nd	44 th	27 th	9 th	3 rd	22 nd
8-S. Central	31 st	25 th	13 th	3 rd	5 th	2 nd	5 th
9-Southeast	36 th	32 nd	12 th	9 th	10 th	2 nd	1 st
OK-Statewide	23 rd	34 th	26 th	14 th	8 th	2 nd	10 th

	Historical Rank: Among five driest.	Description: Cells show the historical rank of recent precipitation on seven time scales. Values are compared to analogous periods ending Aug 10 th . There are 86 such periods in the modern climate history (since 1921).
	Historical Rank: 6 th through 10 th driest.	
	Historical Rank: Among driest quarter.	

Information from the Oklahoma Fire Danger Model (OKFD Model)

The OKFD Model's full output suite is updated hourly at the Mesonet AgWeather pages: <http://agweather.mesonet.org>

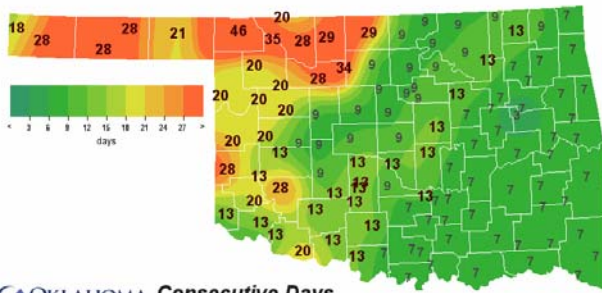


Keetch-Byram Drought Index (KBDI) on Sep. 30th, 2006. KBDI is an indicator of drought's impact on wildfire danger. As values increase, more subsurface organic matter is available as fuel for wildfire, and fires are more energetic and difficult to extinguish. For comparison, average September KBDI ranges from about 225 in northern Oklahoma to 425 in the panhandle.

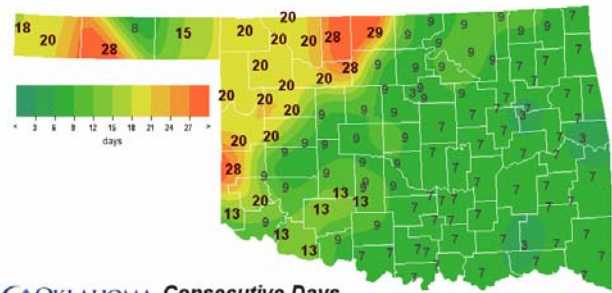
OKFD Model Burning Index (BI) at 4pm, October 1st, 2006. BI yields expected flame height in tenths of feet. For example, values of 80-109 in north-central Oklahoma suggest potential flame lengths of 8-11 feet. BI values are very dependent on hour-to-hour weather changes. BI exceeded 100 across much of Oklahoma during several September afternoons.

Days since Significant Rainfall

The following maps show the consecutive days with less than one-quarter or one-tenth inch of rain at each of the 116 Oklahoma Mesonet stations.



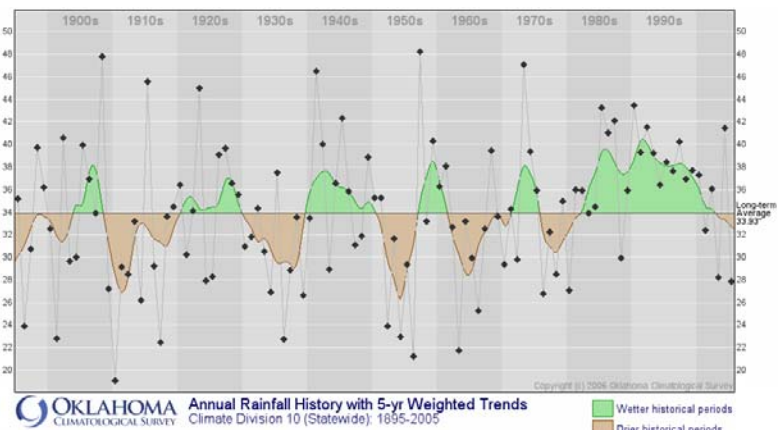
OKLAHOMA CLIMATOLOGICAL SURVEY
Consecutive Days with less than 0.25" rainfall through Sep 30, 2006
Copyright (c) 2006 Oklahoma Climatological Survey. All rights reserved. Rainfall data collected by Oklahoma Mesonet.
 Consecutive days with 0.25" rainfall or less, as of Sep. 30th.



OKLAHOMA CLIMATOLOGICAL SURVEY
Consecutive Days with less than 0.10" rainfall through Sep 30, 2006
Copyright (c) 2006 Oklahoma Climatological Survey. All rights reserved. Rainfall data collected by Oklahoma Mesonet.
 Consecutive days with 0.10" rainfall or less, as of Sep 30th.

Historical Rainfall Variability

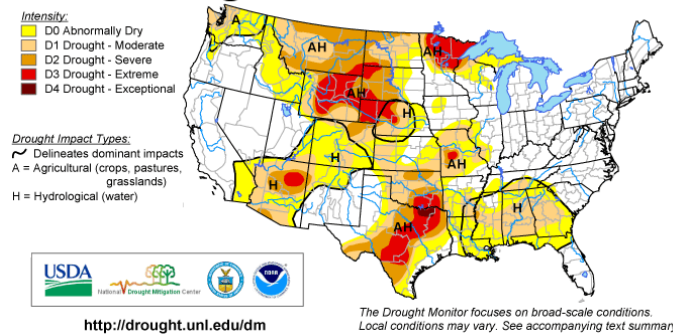
An examination of Oklahoma's rainfall history suggests a prevailing wet-dry cycle of about 5-10 years. This graphic displays statewide annual rainfall since 1895. Droughts of the 1910s, 1930s and 1950s emerge as brown lobes. Until recently, the state enjoyed a sustained period of relatively wet conditions dating to the 1980s. This period of prolonged wetness – to which many Oklahomans grew accustomed – is unmatched in the state's recorded rainfall history. Similar graphics are available by season and by month, for precipitation and temperature at <http://climate.ocs.ou.edu>.



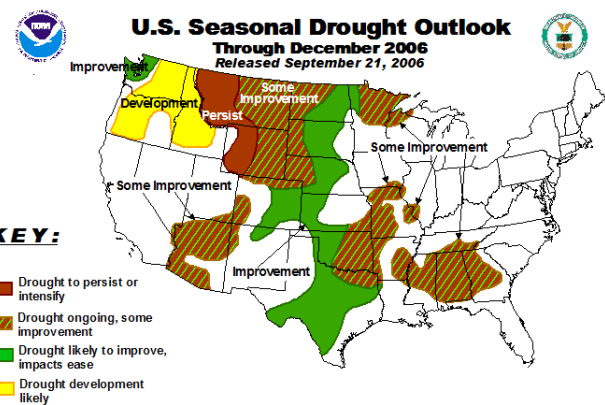
OKLAHOMA CLIMATOLOGICAL SURVEY
Annual Rainfall History with 5-yr Weighted Trends
Climate Division 10 (Statewide): 1895-2005

Assessment and Forecast from a National Perspective

U.S. Drought Monitor September 26, 2006



The US Drought Monitor (<http://drought.unl.edu>) is a weekly multi-agency assessment of the nation's broad-scale drought conditions. Categories symbolize various levels of "unusualness". Severity is based on climate observations and impact assessments from local, state and regional experts. OCS serves as Oklahoma's primary voice to Drought Monitor authors.



The Drought Outlook is published monthly by NOAA's Climate Prediction Center (<http://www.cpc.noaa.gov>). It offers the forecaster's "best estimate" outlook for development and improvement of drought, based on various climate models and long-range techniques. The skill of long-term forecasts (beyond a week) is much, much less than 5-day, or even 7-day forecasts.

For more information ...

Please contact the OCS Climate Information Group for more information about these and other products.