

Oklahoma Drought Update

Oklahoma Climatological Survey

Climate Information Group

February 10th. 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 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 the archives of the Oklahoma Climatological Survey indicate that most of the state is experiencing drought on multiple timescales. The historical magnitude of the ongoing drought is most severe in southeast, south-central, northeast and east-central Oklahoma, but severe drought impacts advanced westward during January. The southeast has experienced drought or near-drought conditions dating to 2002, with a distinct intensification in spring 2005. Summer and fall 2005 marked a northward expansion of severe drought to fill much of the state's eastern third. Subsequent months brought further intensification and westward expansion into the remainder of the state, despite short-lived relief from January rains in parts of south-central and southeast Oklahoma.

Historical Rank of the Current Drought

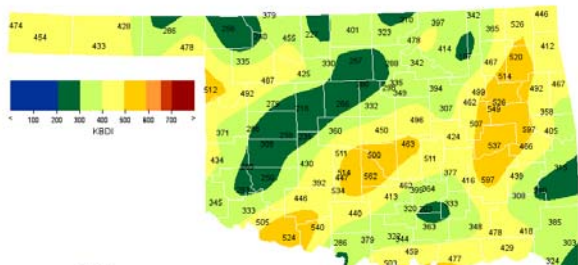
These are the historical rankings of recent rainfall on seven different timescales. Each is compared to a history made up of the 85 such time periods since 1921. For example: the rank of "2nd" for northeast Oklahoma's 90-day rainfall indicates that the 90-day total (Nov 12th, 2005 through Feb 9th, 2006) is the 2nd-driest such period of the 85 on record.

OK Region	Rank by Time Scale: For Periods Ending February 9 th						
	30-Day	60-Day	90-Day	120-Day	180-Day	365-Day	Two-Year
1-Panhandle	13 th	8 th	8 th	11 th	18 th	20 th	57 th
2-N. Central	11 th	6 th	2 nd	5 th	25 th	14 th	43 rd
3-Northeast	21 st	10 th	1 st	2 nd	9 th	4 th	21 st
4-W. Central	10 th	9 th	2 nd	1 st	40 th	23 rd	65 th
5-Central	16 th	3 rd	1 st	1 st	20 th	11 th	26 th
6-E. Central	28 th	6 th	1 st	1 st	3 rd	1 st	12 th
7-Southwest	8 th	5 th	1 st	1 st	25 th	12 th	42 nd
8-S. Central	34 th	14 th	2 nd	2 nd	13 th	6 th	21 st
9-Southeast	55 th	13 th	1 st	1 st	2 nd	1 st	1 st
OK-Statewide	26 th	4 th	1 st	1 st	8 th	3 rd	24 th

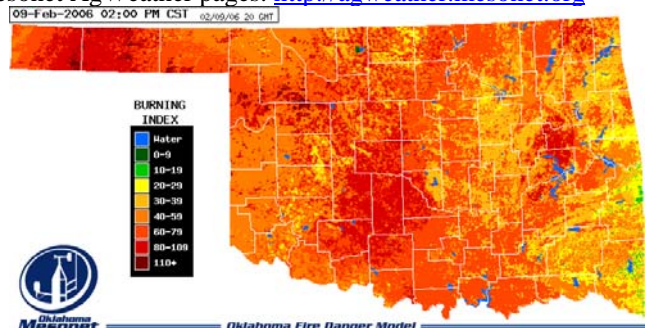
	Historical Rank: Among five driest.	Description: Cells show the historical rank of recent precipitation on seven time scales. Values are compared to analogous periods ending Feb. 9 th . There are 85 such periods in the modern climate history (since 1921).
	Historical Rank: 6 th through 10 th driest.	
	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>



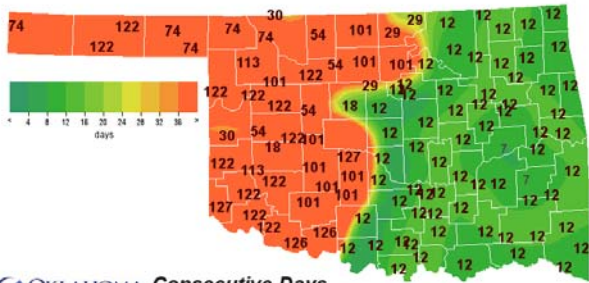
Keetch-Byram Drought Index (KBDI) after Feb 9th, 2006. KBDI is one indicator of drought's impact on wildfire danger. As values increase, more subsurface organic matter is available as fuel for wildfire, and fires are more energetic and difficult to extinguish. For comparison, average January KBDI ranges from about 20 in eastern Oklahoma to 295 in the panhandle.



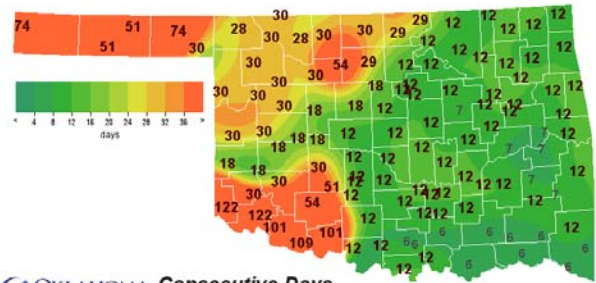
OKFD Model Burning Index (BI) at 2:00 pm Feb 9th, 2006. The BI yields expected flame height in tenths of feet. For example, values of 80-109 in much of Grady County suggest potential flame lengths of 8-11 feet. BI values are highly dependent on hour-to-hour weather changes. BI values exceeded 100 across much of Oklahoma during several January 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. A substantial number of stations have not observed significant rainfall since October. The large values in the west underscore the recent westward expansion of severe drought conditions from eastern Oklahoma.



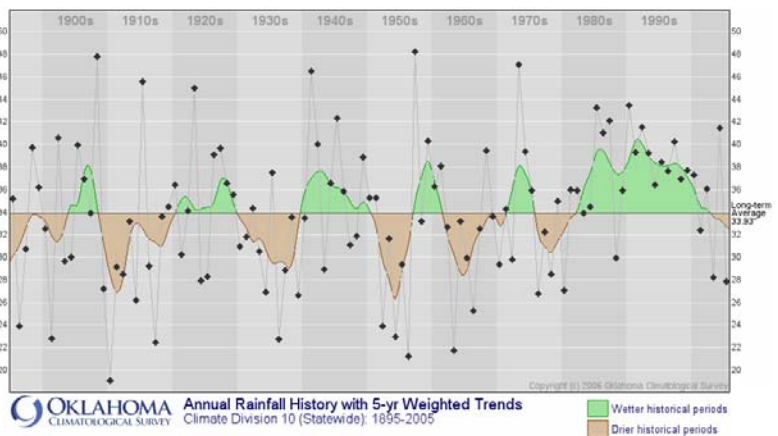
OKLAHOMA CLIMATOLOGICAL SURVEY Consecutive Days with less than 0.25" rainfall through Feb 9, 2006
 Copyright (c) 2006 Oklahoma Climatological Survey. All rights reserved. Kanfarid data collected by Oklahoma Mesonet.
 Consecutive days with 0.25" rainfall or less, as of Feb 9th.



OKLAHOMA CLIMATOLOGICAL SURVEY Consecutive Days with less than 0.10" rainfall through Feb 9, 2006
 Copyright (c) 2006 Oklahoma Climatological Survey. All rights reserved. Kanfarid data collected by Oklahoma Mesonet.
 Consecutive days with 0.10" rainfall or less, as of Feb 9th.

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>.

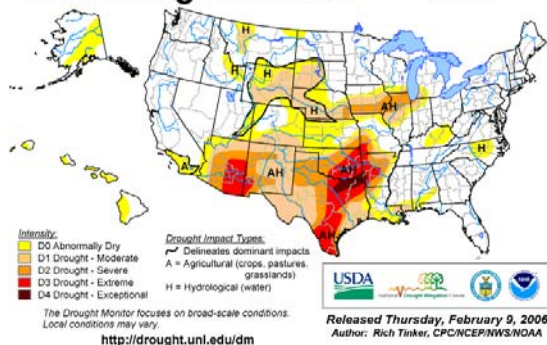


OKLAHOMA CLIMATOLOGICAL SURVEY Annual Rainfall History with 5-yr Weighted Trends Climate Division 10 (Statewide), 1895-2005
 Copyright (c) 2006 Oklahoma Climatological Survey

Wetter historical periods
 Drier historical periods

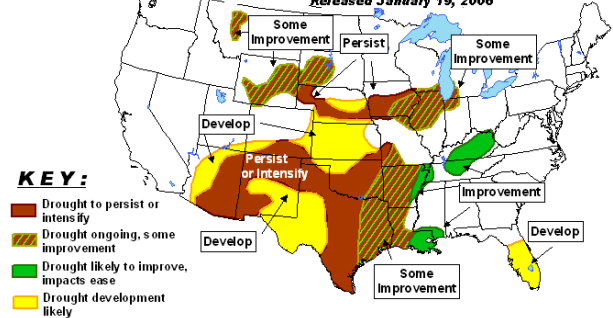
Assessment and Forecast from a National Perspective

U.S. Drought Monitor February 7, 2006



The US Drought Monitor (<http://drought.unl.edu>) is a 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.

U.S. Seasonal Drought Outlook Through April 2006 Released January 19, 2006



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.