Oklahoma Drought Update
Oklahoma Climatological Survey
Climate Information Group
February 28th. 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 north-central Oklahoma's 90-day rainfall indicates that the 90-day total (Nov 30th, 2005 through Feb 28th, 2006) is the 2nd-driest such period of the 85 on record.

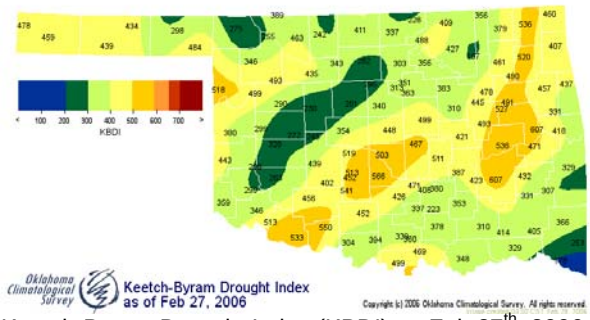
	Rank by Time Scale: For Periods Ending February 28th						
OK Region	**30-Day**	**60-Day**	**90-Day**	**120-Day**	**180-Day**	**365-Day**	**Two-Year**
1-Panhandle	**1st**	**3rd**	**1st**	6th	6th	21st	55th
2-N. Central	**1st**	**3rd**	**2nd**	**3rd**	5th	11th	44th
3-Northeast	4th	8th	**1st**	**2nd**	**1st**	**2nd**	20th
4-W. Central	**2nd**	4th	**1st**	**1st**	5th	23rd	64th
5-Central	6th	5th	**1st**	**1st**	**1st**	7th	27th
6-E. Central	5th	9th	**1st**	**1st**	**1st**	**1st**	13th
7-Southwest	4th	**1st**	**1st**	**1st**	10th	12th	38th
8-S. Central	9th	15th	4th	**2nd**	5th	6th	19th
9-Southeast	7th	23rd	4th	**3rd**	**2nd**	**1st**	**2nd**
OK-Statewide	4th	9th	**1st**	**1st**	**1st**	**2nd**	22nd

Historical Rank: Among five driest.
Historical Rank: 6th through 10th driest.
Historical Rank: Among driest quarter.

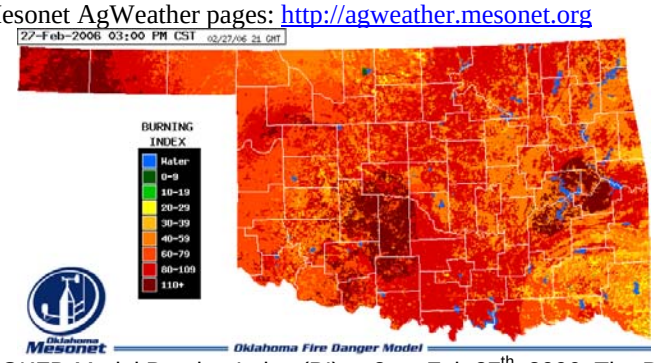
Description: Cells show the historical rank of recent precipitation on seven time scales. Values are compared to analogous periods ending Feb. 28th. There are 85 such periods in the modern climate history (since 1921).

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 Feb 27th, 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 Feb/Mar KBDI ranges from 15 in southeast Oklahoma to about 250 in the panhandle.



OKFD Model Burning Index (BI) at 3pm Feb 27th, 2006. The BI yields expected flame height in tenths of feet. For example, values of 80-109 in much of Carter 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 Jan/Feb afternoons.

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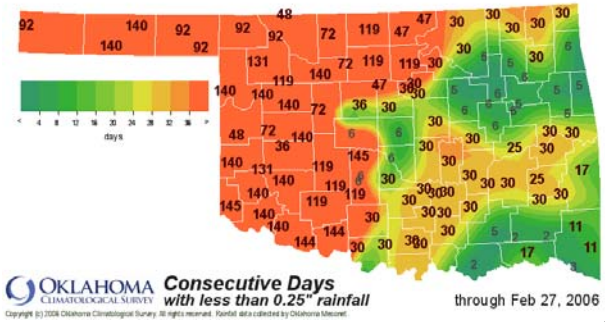
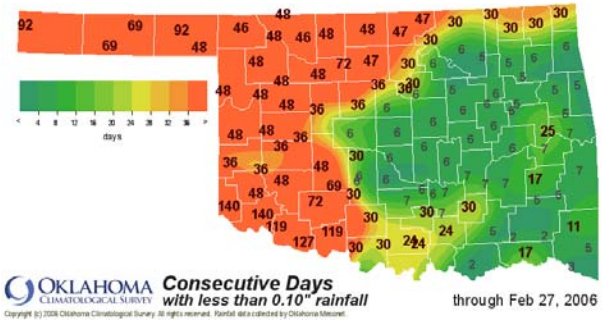
Days since Significant Rainfall

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. Some stations in the southwest 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.



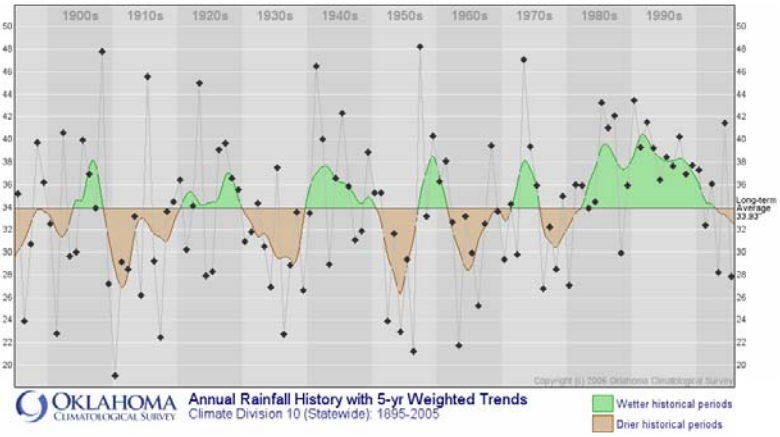
Consecutive days with 0.25" rainfall or less, as of Feb 27th.



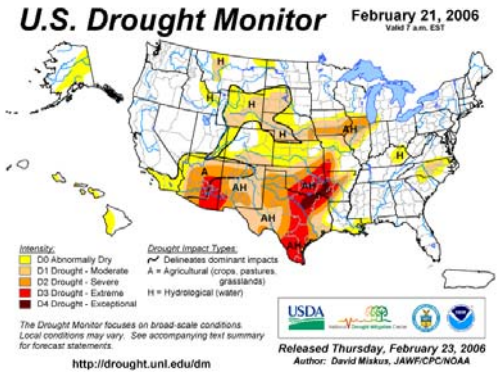
Consecutive days with 0.10" rainfall or less, as of Feb 27th.

Historical Rainfall Variability

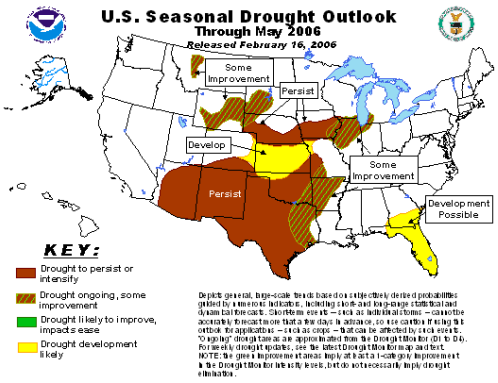
An examination of Oklahoma's rainfall history suggests a prevailing wet-dry cycle of about 5-10 years. This graphic displays statewide annual rainfall since 1895. Droughts of the 1910s, 1930s and 1950s emerge as brown lobes. Until recently, the state enjoyed a sustained period of relatively wet conditions 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.



Assessment and Forecast from a National Perspective



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.

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