

Oklahoma Drought Update

Oklahoma Climatological Survey

Climate Information Group

January 26, 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 Oklahoma Climatological Survey indicate that most of the state is experiencing drought on multiple time scales. For most regions, the current episode ranks among the modern climate record's five most severe events for analogous seasons. The historical magnitude is especially severe in southeast, east-central, northeast and south-central Oklahoma. 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. December 2005 brought further intensification and westward expansion into the remainder of the state.

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: a rank of "3rd" for west-central Oklahoma's 90-day rainfall indicates that the 90-day total (Oct 27, 2005 through Jan 24, 2006) is the 3rd-driest such period of the 85 on record.

OK Region	Time Scale						
	30-Day	60-Day	90-Day	120-Day	180-Day	365-Day	Two-Year
1-Panhandle	18 th	23 rd	18 th	31 st	21 st	27 th	56 th
2-N. Central	20 th	7 th	5 th	19 th	27 th	19 th	46 th
3-Northeast	7 th	1 st	2 nd	1 st	5 th	5 th	21 st
4-W. Central	27 th	10 th	3 rd	21 st	50 th	37 th	64 th
5-Central	7 th	1 st	1 st	3 rd	23 rd	13 th	27 th
6-E. Central	4 th	1 st	1 st	1 st	2 nd	2 nd	12 th
7-Southwest	9 th	1 st	2 nd	8 th	37 th	20 th	43 rd
8-S. Central	13 th	1 st	2 nd	4 th	14 th	6 th	22 nd
9-Southeast	24 th	2 nd	2 nd	1 st	2 nd	1 st	3 rd
OK-Statewide	6 th	1 st	2 nd	3 rd	10 th	6 th	25 th

Historical Rank: Among five driest.

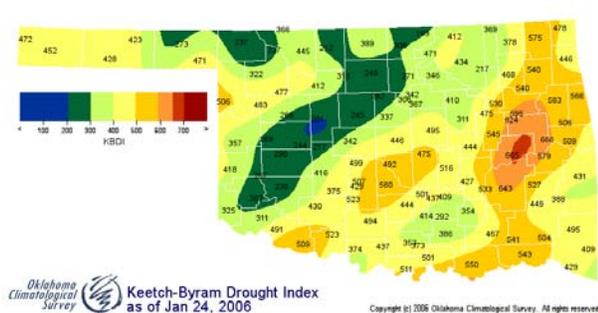
Historical Rank: 6th through 10th driest.

Historical Rank: Among driest quarter.

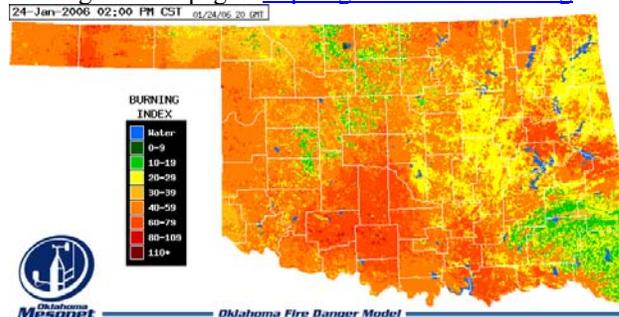
Description: Cells show the historical rank of recent precipitation on seven time scales. Values are compared to analogous periods ending Jan. 24th. There are 85 such periods in the modern climate history (since 1921).

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>



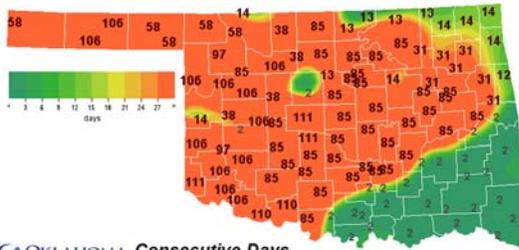
Keetch-Byram Drought Index (KBDI) on Jan 24, 2006. KBDI is an indicator of drought's impact on wildfire danger. As values increase, more subsurface organic matter is available as fuel for wildfire. This causes fires to be more energetic and difficult to extinguish. For comparison, average January KBDI ranges from about 20 in eastern Oklahoma to 295 in the panhandle.



OKFD Model Burning Index (BI) at 2:00 pm Jan 24, 2006. The BI yields expected flame height in tenths of feet. For example, values of 60-79 in much of Grady County suggest potential flame lengths of 6-8 feet. BI values are highly dependent on hour-to-hour weather changes. During early January, afternoon BI values exceeded 200 across much of Oklahoma.

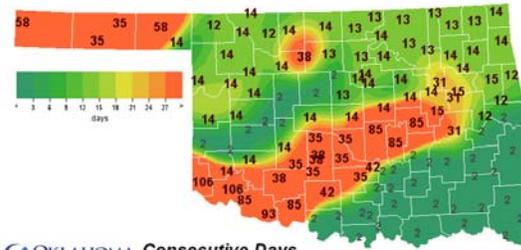
Days since Significant Rainfall

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. These graphics underscore the recent westward expansion of drought conditions from eastern Oklahoma.



OKLAHOMA CLIMATOLOGICAL SURVEY Consecutive Days with less than 0.25" rainfall through Jan 24, 2006

Consecutive days with 0.25" rainfall or less, as of Jan 24th.

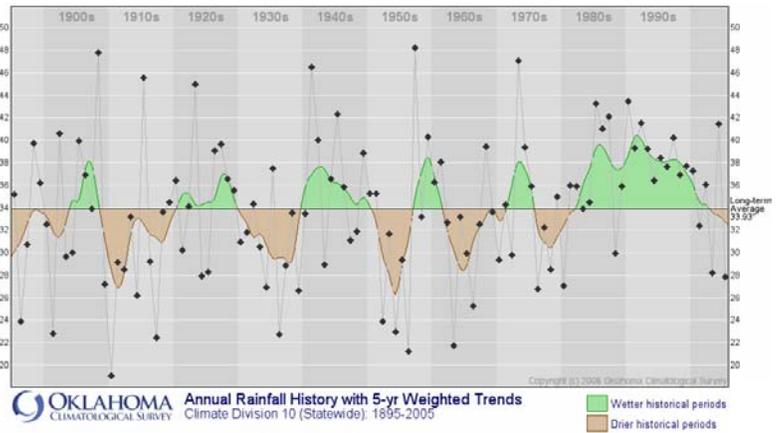


OKLAHOMA CLIMATOLOGICAL SURVEY Consecutive Days with less than 0.10" rainfall through Jan 24, 2006

Consecutive days with 0.10" rainfall or less, as of Jan 24th.

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>.

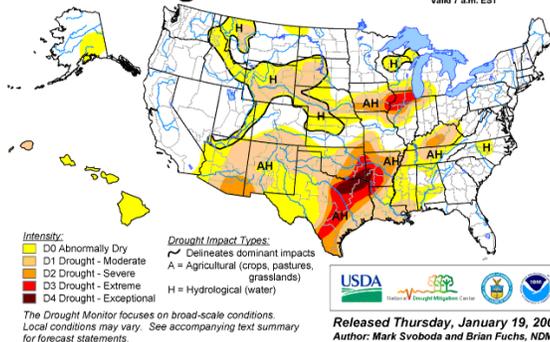


OKLAHOMA CLIMATOLOGICAL SURVEY Annual Rainfall History with 5-yr Weighted Trends Climate Division 10 (Statewide): 1895-2005

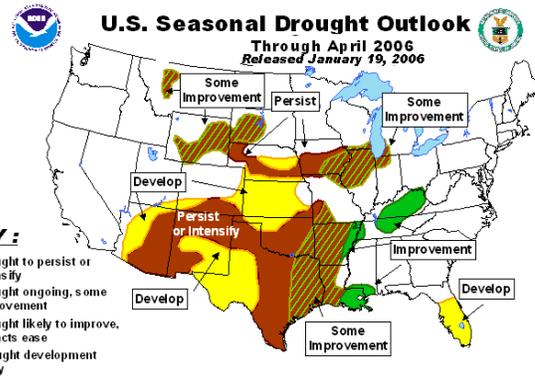
Assessment and Forecast from a National Perspective

U.S. Drought Monitor

January 17, 2006
Valid 7 a.m. EST



Released Thursday, January 19, 2006
Author: Mark Svoboda and Brian Fuchs, NDMC



KEY:
 Brown: Drought to persist or intensify
 Orange: Drought ongoing, some improvement
 Yellow: Drought likely to improve, impacts ease
 Green: Drought likely to improve, impacts ease
 Light Green: Drought likely to improve, impacts ease
 Dark Green: Drought likely to improve, impacts ease

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.

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.