

Oklahoma Drought Update

Oklahoma Climatological Survey

Climate Information Group

April 24th, 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 Oklahoma Climatological Survey archives indicate that the state is undergoing drought on multiple timescales. The drought has now taken on two faces: a short-term event (scale of months) that is worst in the northern half of the state, and a historically-severe long-term drought (seasons to years) in the east. Northeast Oklahoma is at the intersection of both timescales. The southeast has experienced drought or near-drought conditions since 2002, with a distinct intensification in spring 2005. Summer and fall 2005 brought a northward expansion to fill the state's eastern third. Severe drought impacts then advanced westward during the subsequent winter. Some precipitation spring's first weeks helped ease immediate problems, but a warm, dry April has exacerbated conditions in Oklahoma's drought-stricken areas.

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.

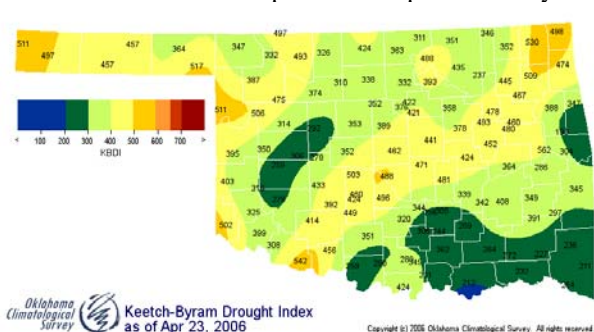
OK Region	Rank by Time Scale: For Periods Ending April 23 rd						
	30-Day	60-Day	90-Day	120-Day	180-Day	365-Day	Two-Year
1-Panhandle	4 th	16 th	11 th	9 th	6 th	20 th	37 th
2-N. Central	4 th	18 th	10 th	10 th	4 th	16 th	21 st
3-Northeast	2 nd	9 th	5 th	2 nd	2 nd	1 st	10 th
4-W. Central	9 th	24 th	12 th	13 th	4 th	31 st	49 th
5-Central	4 th	13 th	9 th	4 th	2 nd	7 th	19 th
6-E. Central	7 th	14 th	12 th	7 th	2 nd	1 st	11 th
7-Southwest	13 th	29 th	12 th	10 th	3 rd	12 th	27 th
8-S. Central	6 th	36 th	22 nd	13 th	3 rd	8 th	21 st
9-Southeast	6 th	47 th	32 nd	25 th	4 th	1 st	1 st
OK-Statewide	6 th	17 th	11 th	6 th	2 nd	2 nd	14 th

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

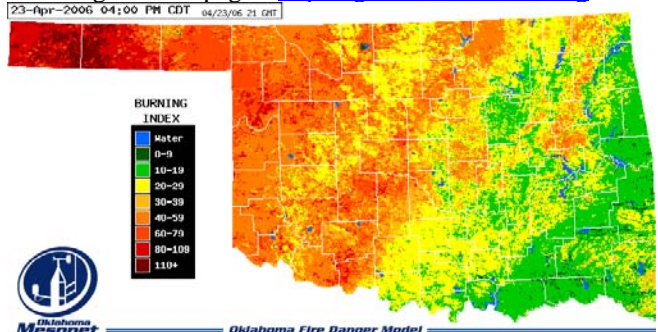
Description: Cells show the historical rank of recent precipitation on seven time scales. Values are compared to analogous periods ending Apr 23rd. There are 85 such periods in the modern climate history (since 1921).

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>



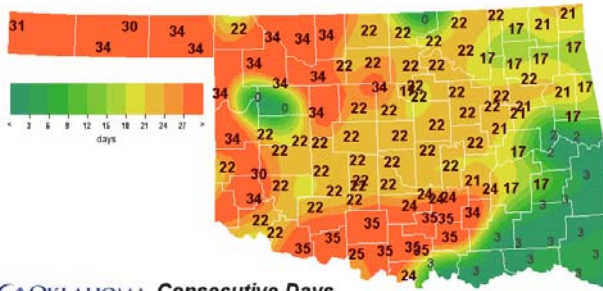
Keetch-Byram Drought Index (KBDI) on Apr 23rd, 2006. KBDI is one indicator of drought's impact on wildfire danger. As values increase, more subsurface organic matter is available as fuel for wildfire, and fires are more energetic and difficult to extinguish. For comparison, average April KBDI ranges from about 50 in southeast Oklahoma to 200 in the panhandle.



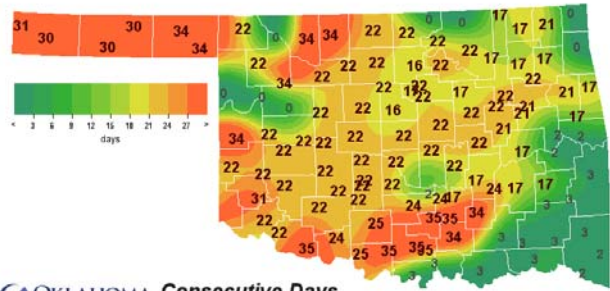
OKFD Model Burning Index (BI) at 4pm Apr 23rd, 2006. The BI yields expected flame height in tenths of feet. For example, values of 110+ in the western panhandle suggest potential flame lengths exceeding 11 feet. BI values are very dependent on hour-to-hour weather changes. BI exceeded 100 across much of Oklahoma during several April 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. Values exceeding 20 days, in either category, are quite rare for April.



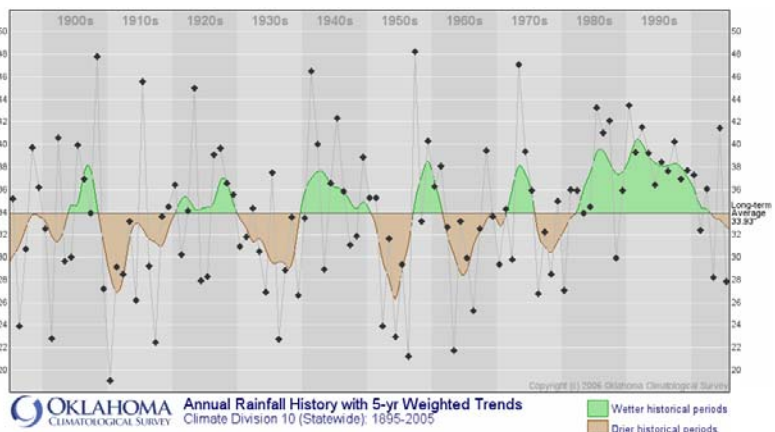
OKLAHOMA CLIMATOLOGICAL SURVEY
Consecutive Days with less than 0.25" rainfall through Apr 23, 2006
Copyright (c) 2006 Oklahoma Climatological Survey. All rights reserved. Rainfall data collected by Oklahoma Mesonet.
 Consecutive days with 0.25" rainfall or less, as of Apr 23rd.



OKLAHOMA CLIMATOLOGICAL SURVEY
Consecutive Days with less than 0.10" rainfall through Apr 23, 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 Apr 23rd.

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>.

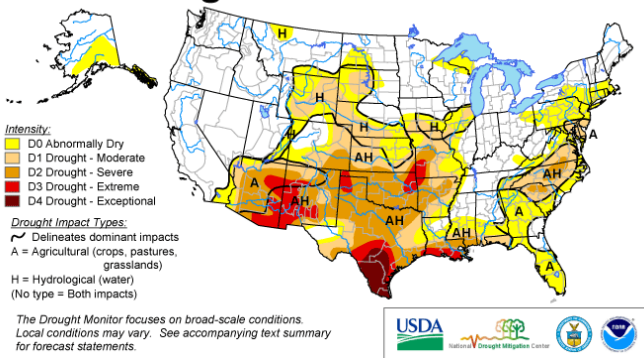


OKLAHOMA CLIMATOLOGICAL SURVEY
Annual Rainfall History with 5-yr Weighted Trends
 Climate Division 10 (Statewide): 1895-2005
Copyright (c) 2006 Oklahoma Climatological Survey

Assessment and Forecast from a National Perspective

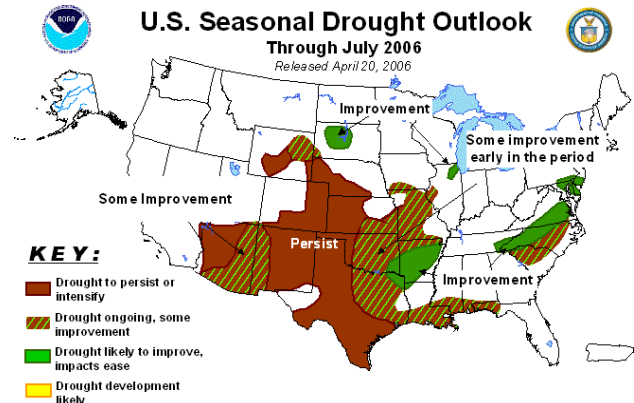
U.S. Drought Monitor

April 18, 2006
 Valid 8 a.m. EDT



U.S. Seasonal Drought Outlook

Through July 2006
 Released April 20, 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.