



WHEN CLIMATE MATTERS

—by Al Sutherland

Weather is the short-term variation of long-term climate patterns. We measure the weather over time to determine the long-term climate averages. To better understand climate and keep up with weather triggered from climate patterns, the Oklahoma Climatological Survey has revised its climate website. This newly designed site links users to state and national climate information quickly and easily.

The new Oklahoma climate website can be accessed by going to the Oklahoma Climatological Survey home page at <http://climate.ok.gov>. This homepage has Oklahoma climate news and access to the widely read Ticker email highlighting interesting weather and climate science. You can also access the site by clicking on the top menu “Climate” button on the Oklahoma Mesonet webpage (mesonet.org).

Thumbnails of data products make it easy to choose the information you want. Maps, tables and graphs are easy to capture for use in print or presentations.

Some widely used products are the Climate Trend graphs of Oklahoma rainfall and air temperature going back to 1895. Interactive menus let you create graphs for each of the nine Oklahoma climate zones with monthly, seasonal or annual changes from 1895-2010.

“Rainfall Summaries by Climate Division” tables and maps have been used extensively to gain a historical perspective of the 2010-2011 Drought. Detailed rainfall data for each climate zone exists back to 1921, making it easy to compare Dust Bowl rainfall to recent rainfall amounts.

At the top of the “My County or Town” section one can get summaries of “Climate Facts by County.” These are climate summaries for each Oklahoma county in a one-page “Quick Climate Facts” or “Detailed Climate Information” format with multiple pages of graphs and tables.

The climate website also has select Oklahoma Mesonet data and products. The Mesonet data goes back to 1994 for most sites. The Oklahoma Mesonet now has 120 site locations.

For a national perspective, you’ll find links to a number of federal National Weather Service and National Oceanic and Atmospheric Administration agencies. For drought status and outlooks, the Oklahoma Climatological Survey website provides a collection of National Drought Mitigation Center products. The National Weather Service Climate Prediction Center’s outlooks provide a glimpse of future conditions. ■

MESONET IN PICTURES

Oklahoma & South-central U.S.

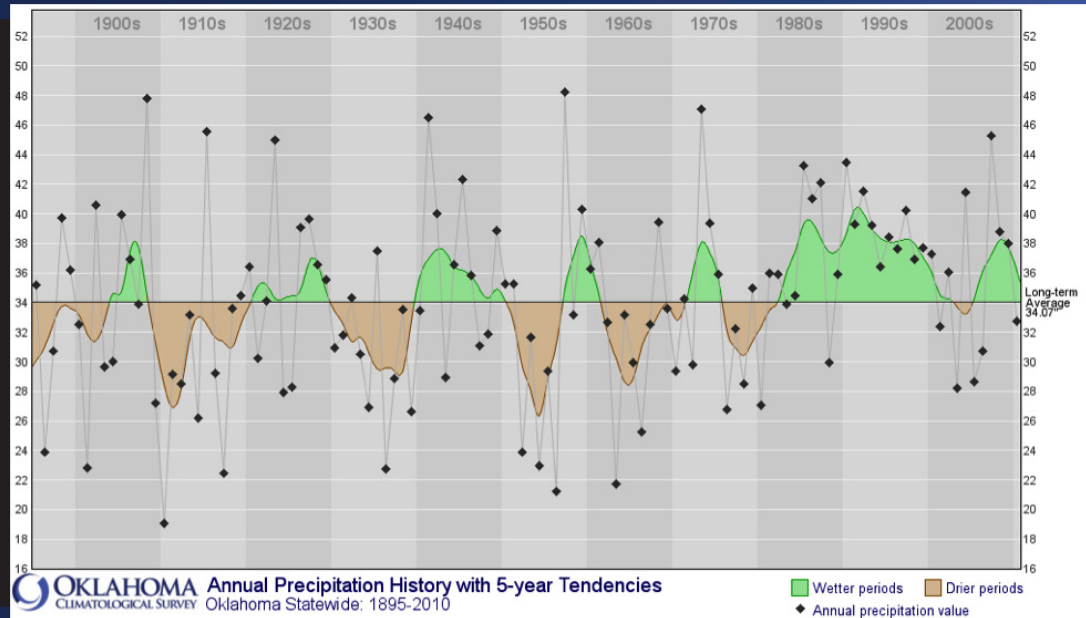
- The webpage accessed when the "Climate" menu bar button is selected from the OCS or Mesonet websites. It includes data for Oklahoma and South-central regional area of the U.S. and a left menu listing all website sections.

The screenshot shows the Oklahoma Climatological Survey website. The main content area is titled "Oklahoma & South-central U.S." and includes a "Current & Recent Conditions" section. This section contains several interactive elements:

- Air Temperature:** A map of Oklahoma showing current air temperatures with a color scale from blue (cooler) to red (warmer).
- Rainfall since midnight:** A map showing observed rainfall since midnight with a color scale from blue (no rain) to red (heavy rain).
- Yesterday's high temperatures:** A map showing the maximum air temperature since midnight.
- Yesterday's low temperatures:** A map showing the minimum air temperature since midnight.
- Rainfall summaries by climate division:** A table summarizing rainfall data by climate division.
- U.S. Drought Monitor - Oklahoma:** A map of Oklahoma showing drought conditions, with a legend indicating different levels of drought severity.

Precipitation History – Annual, Statewide

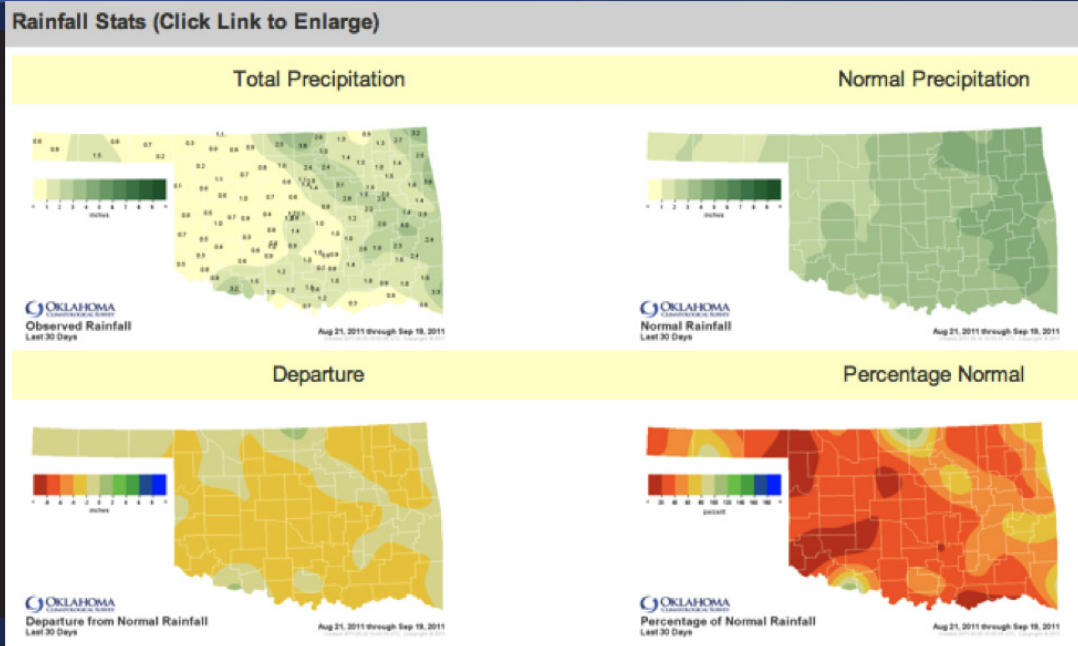
- A graph of annual precipitation from 1895 to 2010. To access this graph, select "Climate" from the top OCS or Mesonet menu bar, scroll down page to "Long-term Averages & Extremes" section and select "Precipitation history – Annual, statewide."



MESONET IN PICTURES

Rainfall Maps

- “Rainfall summaries by climate division” maps at the bottom of the webpage are created on the fly based on the time period chosen at the top of the page. The page can be accessed by clicking the “Climate” top menu button and clicking the “Rainfall summaries by climate division” thumbnail.



Climate Facts by County

- The “Climate Facts by County” link brings up a page for selecting climate summaries for any of Oklahoma’s 77 counties. To access this page select “Climate” from the top OCS or Mesonet webpages, then choose “My County or Town” from the left menu items and then “Climate Facts by County.”

OKLAHOMA CLIMATOLOGICAL SURVEY

Home About News Contact Oklahoma Mesonet

Climate Weather Research Outreach Reports Search

My County or Town

Summary Information

Climate Facts by County

The county links lead to a page that includes data from the National Weather Service Cooperative Observer Program and the Oklahoma Mesonet. Quick climate facts and longer, more detailed climate data can be found for each county. Information concerning temperature, precipitation, humidity, wind, soil, freeze data, extremes and normals can all be found in the individual county pages.



OK-First Welcomes New Leader

—by Stephanie Bowen

SUMMER 2011 has been a record-breaking summer in more ways than one, and emergency managers across the state worked hard to protect their communities from tornadoes, drought and wildfires. Working together, the Oklahoma Mesonet provides training to emergency managers through the OKFirst program to better prepare them for these weather disasters.

The Oklahoma Mesonet welcomes James Hocker as the new leader of the OKFirst program. Hocker started with the Mesonet in July and trains emergency managers across the state on weather and radar. Hocker's vision is to move more toward mobile technology.

“Times have changed,” Hocker said. “My vision is reinventing the software formats to get information out, push for more mobile applications, and be open to distance learning.”

Hocker has created an advisory committee to meet and guide the program to better serve emergency managers and provide the weather tools and training necessary to meet the needs of their community.

Hocker came to OU in 2000 to study meteorology and earned his bachelor's degree in 2004. In 2006, he completed his Master of Science in meteorology. For his master's, Hocker developed a 10-year climatology of supercell and squall line storms across Oklahoma. The results were published in the *Journal of Applied Climatology and Meteorology* and the *International Journal of Climatology*.

As a meteorology student, he worked at the National Severe Storms Lab, interned with the Storm Prediction Center, and volunteered at the National Weather Service.

After graduation, Hocker started work at the OU Office of Weather Programs and Projects. He worked with developing countries to improve their weather monitoring systems.

Before coming to the Mesonet, Hocker was the Program Manager of the Southern Climate Impacts Planning Program (SCIPP) at the Oklahoma Climatological Survey office. SCIPP is a climate research initiative to help communities better plan for weather and climate-related disasters.

Hocker grew up in Richardson, Tex., a northern suburb of Dallas. He has been married for six years to Sachi, a Norman third grade teacher, and they had their firstborn, George, in June. The Oklahoma Mesonet is happy to have James on the team and looks forward to the impact his talents and skills will make within the OKFirst program. ■



2011 Summer Heat

By Gary McManus, Associate State Climatologist

AUGUST WRAP-UP

To get a sense of the state's legendary heat waves of its past, Oklahoma's youngest generation would normally turn to the stories of parents, grandparents or great-grandparents. Tales of those summers from the 1930s, 1950s and even 1980 seemed as dated as rotary phones or changing the television channel by hand. They will no longer need to ask older generations about harsh summers, however. They now have their own stories to tell, and theirs will be from the hottest of them all – the summer of 2011.

According to data from the Oklahoma Mesonet, the state's climatological summer – June 1 through August 31 – ended with a statewide average of 86.8 degrees, obliterating the previous state record of 85.2 degrees from the summer of 1934. In fact, that previous 1934 mark was the warmest summer on record for any state since records began in 1895.

The highest temperature during this summer was 115 degrees, recorded in June at Erick and Hollis and in August at Wilburton and Wister. Oklahoma City smashed its record for hottest summer with an average of 87.5 degrees, besting the previous mark of 85.9 degrees set in 1934 and 1980. Grandfield's three-month average of 92 degrees led the state with Kenton the coolest at 79.5 degrees.

August put the final touches on the momentous 2011 summer. The statewide average temperature was 87.7 degrees, 7.3 degrees above normal and the warmest August on record for Oklahoma. The previous record was 87.2 degrees from 1936. Southwest Oklahoma, the area hit hardest by the drought and heat, had an average temperature of 91 degrees, 9.2 degrees above normal.

The Oklahoma Mesonet site at Grandfield recorded a high temperature at or above 100 degrees an astounding 97 times for the year from April 18-September 1. The previous high count for one year was 86 days by Hollis during the summer of 1956.

The heat has been fed by extreme drought that began nearly a year ago. The statewide average precipitation total from October 1, 2010-August 31, 2011, finished at 18.59 inches, 14.29 inches below normal and the third driest such period on record. That 11-month period was the driest on record for the Panhandle, north central, west central and southwestern Oklahoma. The Oklahoma Mesonet sites at Boise City, Grandfield, Goodwell and Hooker all recorded less than 6 inches of rainfall since October 1.

86.8°F
NEW RECORD

summer average
air temperature

115°F
HIGHEST

summer air temperature

14.3"
BELOW

statewide precipitation
for Oct. 1, 2010 to Aug. 31, 2011

6"
RAINFALL

or less recorded at Boise City,
Grandfield, Goodwell and
Hooker since Oct. 1, 2010

CALENDAR

SEPTEMBER

- ▶ 21-22nd: OK-First Assistant's Course, Norman
- ▶ 28th: OK-First Refresher Course, Tulsa
- ▶ 28th: Oklahoma Water Monitoring Forum, OKC
- ▶ 29th-30th: Mesonet Exhibit, Ft. Reno Calvary Showcase, El Reno
- ▶ 30th: OSU Wildfire Ecology and Management course presentation, Stillwater
- ▶ 30th: OK-First Refresher Course, Altus

OCTOBER

- ▶ 1st: OK Science Teachers Association Conference presentation, Edmond
- ▶ 4th: Women in Science Conference for Middle & High School booth, OKC
- ▶ 6th: OK-First Refresher Course, McAlester
- ▶ 12-13th: OK-First Assistant's Course, Tulsa
- ▶ 17th: OSU Intro to Plant and Soil Systems course presentation, Stillwater
- ▶ 17-18th: Governor's Water Conference exhibit, OKC
- ▶ 18-20th: Fire and Forest Meteorology Symposium presentations, Palm Springs, CA
- ▶ 26th: Kansas Aerial Applicators Conference presentation, Hutchinson, KS

CONTACTS

Accessing recent (within the past 7 days)
Mesonet data

Contact: [Mesonet Operator](#)

Instrumentation, telecommunications, or
other technical specifications

Contact: [Chris Fiebrich](#)

Mesonet agricultural data and products

Contact: [Al Sutherland](#)

Mesonet meteorological data

Contact: [OCS Data Requests](#)

K-12 educational outreach

Contact: [Andrea Melvin](#)

OK-First

Contact: [James Hocker](#)

OK-FIRE

Contact: [J.D. Carlson](#)

Not sure?

Contact: 405-325-2541 or [Chris Fiebrich](#).

FORECAST FOR SEPTEMBER

[Click here to view the original maps from the Climate Prediction Center.](#)

