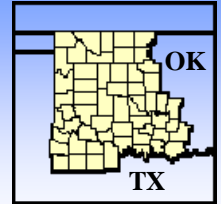




The Southern Plains Cyclone

A Weather Newsletter from your Norman Forecast Office for the Residents of western and central Oklahoma and western north Texas



We Make the Difference When it Matters Most!

Volume 4

Fall 2006

Issue 4

Meet Your Weatherman Kenny James



Hi there! My name is Kenny James and I am a Journeyman Forecaster at the Norman Weather Service forecast office. I am one of twelve forecasters that work around the clock to provide constant weather information and warn the public of hazardous weather.

My interest in weather started when I was young. I still remember enthusiastically presenting the weather in kindergarten class. Growing up in Syracuse, NY, my earliest fascination was with snow. This led me to Oswego, NY, where I received a Bachelor's Degree in Meteorology in 1992. After graduation, I volunteered at a National Weather Service office in Syracuse, before becoming a Meteorological Intern in South Carolina.

During my eight years in Norman, I experienced so many significant severe weather outbreaks that I have lost count. October 4, 1998, May 3, 1999 and May 8/9, 2003 are the most memorable, and I played a key role in all of them.

See **Weatherman** on page 2

National Weather Center Dedication

By Keli Tarp, NOAA Public Affairs Specialist

The National Weather Center, the new home of the National Weather Service Forecast Office in Norman, OK, is a unique partnership of the National Oceanic Atmospheric Administration and University of Oklahoma's Norman-based weather research and operations programs. The National Weather Center (NWC) officially opened its new facility at a public dedication September 29, 2006.

"The opening of the Weather Center is an important milestone in the history of our state as we move to build a diversified economy

based upon research and high technology," said University of Oklahoma President David L. Boren. "The center literally makes Norman the weather capitol of the nation and establishes OU as the nation's academic leader in meteorology."

In addition to Boren, ceremony speakers included NOAA Chief of Staff Scott Rayder, Deputy Secretary of Commerce David A. Sampson and Oklahoma Governor Brad Henry.

A luncheon panel for the

See **Dedication** on page 3

Are you Cuckoo for CoCoRaHS? Community Rainfall Network Seeks Volunteers

By Patrick Burke, General Forecaster

Are you excited every time it rains? Maybe you have your own gauge and eagerly trade rainfall amounts with your friends and neighbors after a good storm. Now you can share your enthusiasm and your reports with the National Weather Service. This summer, a volunteer weather observing program, called the Community Collaborative Rain, Hail and Snow Network (or CoCoRaHS - pronounced Cocoa Rawz), expanded into Oklahoma. The project is already available in Texas, as well. Anyone with a rain gauge, internet access, and an interest in weather can participate.

Using the CoCoRaHS website, observers submit their 24-hour daily rain totals, which are then available for the world to see. Participants also have the option to provide more detailed hourly observations, intense rainfall reports, and notes to help describe each weather event. Dozens of Oklahomans and Texans are already participating.

Headquartered in Colorado, CoCoRaHS currently includes well over 2000 volunteer citizens of all ages in 12 states and the District of Columbia. With funding from the National Science Foundation,

See **CoCoRaHS** on page 4

Tales, Legends, and Other Sayings

By Mike Branick, Lead Forecaster

Weather-related sayings and stories have been commonplace in many cultures since the beginning of time, many of which have been passed down through the years. Are they truth, or are they myth? Can they really be used to predict the weather? This column will examine a different popular weather saying in each issue, exploring its origins and whether or not there is any real meteorological truth upon which it might be based.

If you have heard of a particular weather-related story or saying that you've always wondered about and would like us to look into it, please e-mail your questions and requests to Jennifer.Palucki@noaa.gov.

This Issue's Topic – "Red sky at night, sailor's delight. Red sky at morning, sailors take warning."

This legendary rhyme most likely originated in the 17th or 18th century, or perhaps even earlier - long before

there was such a thing as weather forecasts. In the days before electricity, radio, etc., everyone - especially mariners at sea - had to make their own weather predictions based on clues provided by their natural surroundings. In this case, observers noted that when there is a red sunset, fair weather would follow. Likewise, if the sky was red at sunrise, bad weather was on the way. (Note that in England the saying replaces "sailor" with "shepherd." Seem that English shepherds noticed the same thing.)

But does it really work? Surprisingly, the saying has some basis in physical truth. The basis lies in two fundamental principles of meteorology that work much of the time, at least outside of the tropics:

1. Weather systems move from west to east, and
2. A red sky indicates the presence of dry air.

So, if there is a red sky at sunset, there is dry air to the west that's moving toward you - and fair weather is on the way. But if the eastern sky is red at sunrise, the dry air is retreating off to the east and a storm may be moving in from the west.

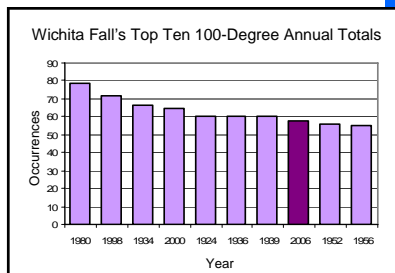
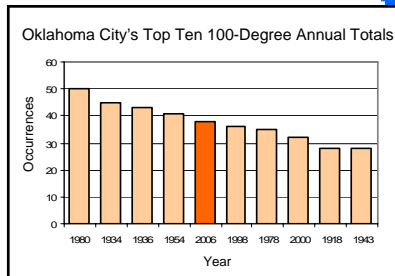
While this saying may indeed be a reasonably good "rule of thumb" to base a weather prediction on, it won't work every time. For one thing, weather systems don't always move from west to east; sometimes they stall, or on rare occasions move the other way from east to west (a process known as retrograding). In these cases, the rule might backfire. Or, if a red sunrise indicates dry air moving out to the east, who's to say that there might just be more dry air to the west - and the sunset that evening might turn out to be just as red? The bottom line: It often works, but don't rely totally on it.

100 Degree Days

By Jennifer Palucki, Meteorologist Intern

Fall is here and the heat is over... for this year anyway. Oklahoma and western north Texas warmed up to record levels this summer. In Oklahoma City, 38 days reached 100 degrees or higher. Since 1891, only four years have had more 100-degree days. The warmest temperature observed in Oklahoma City this year was 107 degrees, occurring on July 19 and 20 and August 10. The warmest temperature ever recorded was 113 degrees on August 11, 1936.

In Wichita Falls, 58 days reached 100 degrees or higher. 2006 had the 8th most number of 100-degree days for Wichita Falls. The warmest temperature recorded was 109 degrees, which was observed on July 18 and August 24. The warmest temperature ever recorded was 117 degrees on June 28, 1980.



Weatherman: From Page 1

warnings are what I do best, I have also performed many years of research, which ultimately improves forecasts and warnings. I'm nearly finished with my Master's Degree at the University of Oklahoma with an emphasis in numerical modeling.

Numerical models involve complicated mathematical equations that help predict the weather. One of my most challenging tasks is to evaluate these models and determine which one is most accurate. What makes modeling so fascinating is that they incorporate our conceptual model of the weather, and by understanding models, one begins to understand the weather.

I feel very fortunate to be associated with the Norman Weather Forecast Office. Eventually, I look forward to a leadership or teaching role, either in Norman, or another area where the weather is equally challenging and exciting.

Dedication: From Page 1



Left: Former Oklahoma House Representative and State Senator Cal Hobson, Governor Brad Henry, Deputy Secretary of Commerce Dr. David A. Sampson, and Director of NOAA's National Weather Service BGEN David L. Johnson, USAF (Ret.), pose for pictures before the ribbon cutting.

"The National Weather Center affords the type of collaboration between government, academia and the private sector that offers the best opportunity to advance our understanding and prediction of weather phenomena to save lives and property, as well as to promote economic development." --Deputy Secretary of Commerce David A. Sampson.

Right: National Weather Center as seen from the north.



meteorological community was also held, featuring The Weather Channel on-camera meteorologist Jim Cantore and KWTV News 9 Chief Meteorologist Gary England.

The new National Weather Center facility was designed to encourage synergistic relationships between NOAA researchers and forecasters and OU's faculty, researchers and students. By fostering collaborations between federal and university researchers with expertise not only in severe weather but also such areas as local and regional climate, numerical modeling, hydrology and radar meteorology, it is anticipated that the NWC will be even better able to help federal, state and local government agencies reduce loss of life and property due to hazardous weather, ensure wise use of water resources, enhance agricultural production and develop renewable energy sources.

The NWC organizations will also work with private-sector associates to develop new applications of weather and regional climate information that provide a competitive advantage in the marketplace. Additionally, the new 244,000 square-foot facility - the largest of its kind - will enable OU students to experience and engage in weather research firsthand, helping them become some of the best-equipped weather practitioners in the world.



Above: National Oceanic and Atmospheric Administration and National Weather Service dignitaries pose in front of the Storm Prediction Center, National Severe Storms Laboratory and National Weather Service Norman Forecast Office main entrance.



Below and Left: Audience awaits University of Oklahoma President David L. Boren and others to speak about the National Weather Center in the atrium.



Left: Fountain leading up to the main entrance of the NWC.



CoCoRaHS: From Page 1

organizers hope to see CoCoRaHS become *the* place for nationwide precipitation information. The project originated in 1998, in response to deadly flash floods in Fort Collins and Sterling, Colorado. Both storms produced more than 12 inches of rain in a short time over very small areas. Traditional observing sites, which are sparse and mainly located at airports, measured much less rain. Meteorologists at Colorado State University needed numerous measurements from backyard gauges throughout the two communities to complete their analysis of the floods. Nolan Doesken, the state climatologist for Colorado and CoCoRaHS National Director, subsequently set out to make accurate, high quality precipitation data available to observers and decision makers on a timely basis. Such reports are useful in a variety of applications.

According to Doesken, perhaps the greatest user of CoCoRaHS data is the National Weather Service. Rainfall measurements are very important to issuing and verifying severe weather and urban, rural and river flood warnings. In fact, several dozen National Weather Service employees are volunteers for CoCoRaHS and some are local and state coordinators. Additionally, many people involved in agriculture and natural resources management use the data to identify areas affected by drought. A number of water utilities also help sponsor CoCoRaHS since localized data show changes in both water supply and user demand.

It is important to note that volunteers, and even the general public, can use the website to study precipitation reports from their county, state, or from around the nation. Over time, patterns may emerge, and with a high density of rain gauges covering the landscape we can all learn more about our climate. Do you often complain that storms seem to go around your house? Maybe now, with you and your neighbors reporting to CoCoRaHS, you

will have the evidence to prove it!

In fact the summer of 2006 has already provided some good examples of how dramatically rainfall amounts can differ over short distances. The map below shows rain reports from Cleveland County, OK, for September 17, 2006. Several observers on the north side of Norman, OK, received over an inch of rain, much of which fell in less than one hour. Meanwhile, observers on the south side of Norman, who were less than six miles removed from the heavy thunderstorms, recorded amounts around one tenth of an inch or less. Before CoCoRaHS, this type of ground-truth rainfall mapping was something seen only in special science projects.

While rainfall is at the core of the CoCoRaHS mission, observers are also encouraged to report hail and snow. Training is provided online, and at special live sessions hosted by local coordinators. It is easy to join; just go to the website, <http://www.cocorahs.org>, and request a station number. If you already have a standard four inch rain gauge, you can start reporting right away. Otherwise, you may obtain a gauge from CoCoRaHS for a small donation, or, in some cases, for free. The key to making any volunteer project a success is getting volunteers! Meteorologists will never complain about having *too much* data, so everyone is encouraged to participate.

Oklahoma's local CoCoRaHS coordinator is Andrew Reader (email: areader@mesonet.org) at the Oklahoma Climatological Survey in Norman, OK. In Texas, inquire by email to info@cocorahs.org.

Other CoCoRaHS Tidbits...

For the month of August, there were some surprising variations in rainfall amounts over short distances. Some examples include:

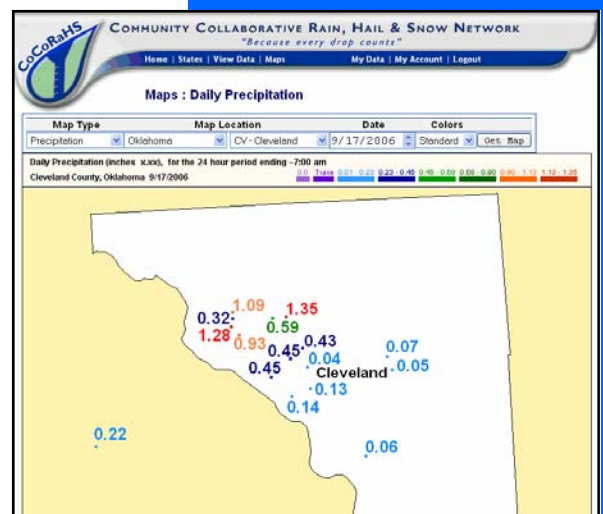
- Mustang 0.2 SE - 2.69 inches
- Mustang 2.1 WNW - 5.37 inches

Over 2.5 inches difference in just over 2 miles! What a difference a few miles makes!

Another example:

- Hall Park 2.7 S - 2.48 inches
- Hall Park 4.7 W - 2.41 inches

In this case, it did not matter which side of town these people lived on; everyone got about the same amount of rain this August.



Above: Community Collaborative Rain, Hail and Snow Network (CoCoRaHS) daily precipitation map (enhanced) for Cleveland County, OK, for September 17, 2006.

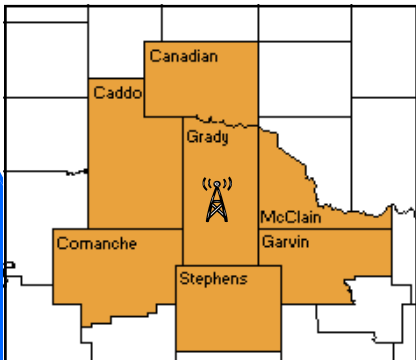
Norman Office Forecast Notebook - A Complete Look at Events and Happenings



By Rick Smith, Warning Coordination Meteorologist

National Weather Festival 2006 - November 4th. Everyone is invited to attend the National Weather Festival, sponsored by the Norman Chamber of Commerce Weather Committee. The festival is scheduled for Saturday, November 4th, from 9am until 1pm at the new National Weather Center in Norman. The festival will give you an opportunity to tour the new weather center and to see the NWS Forecast Office, the Storm Prediction Center, Warning Decision Training Branch, National Severe Storms Laboratory, University of Oklahoma School of Meteorology, Oklahoma Climatological Survey, and much more. There will be hourly weather balloon launches and lots of activities for the entire family, including - for the first time - a Storm Chaser Car Show. And the best part is... it's all FREE!

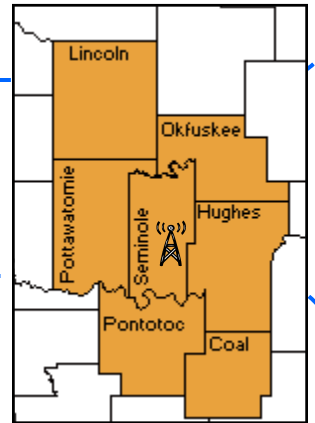
For more information about the National Weather Festival, visit the website at www.norman.noaa.gov/publicaffairs/openhouse06/.



Above: Proposed county coverage of the Chickasha, Oklahoma weather radio transmitter.

New Weather Radio Transmitters - Wewoka and Chickasha. Two new weather radio transmitters will soon be providing 24 hour a day weather information to the people of Oklahoma. Wewoka, Oklahoma will be the site of a new 1000 watt transmitter that will provide forecasts and warnings to parts of central and east central Oklahoma. The Wewoka transmitter will be on 162.550 MHz. The second new transmitter will be located near Chickasha. This 300 watt transmitter will provide weather information around the clock to parts of central Oklahoma on a frequency of 162.450 MHz. Both transmitters will be programmed from the National Weather Service office in Norman.

NWS Norman is responsible for programming a total of 13 weather radio transmitters: Ardmore, Atoka, Oklahoma City, Ponca City, Stillwater, Lawton, Clinton, Enid, Woodward, Chickasha, Wewoka, Altus and Wichita Falls.



Above: Proposed county coverage of the Wewoka, Oklahoma weather radio transmitter.

Weather Radio Programming Event.

On September 16th, NWS staff joined personnel from Oklahoma City Emergency management and the State of Oklahoma Department of Emergency Management in a NOAA Weather Radio awareness and programming event. Around 50 people stopped by to learn more about weather radio and to have their radios programmed. We hope to do another programming event in the spring.



By Rick Smith, Warning Coordination Meteorologist

StormReady recognizes the hard work and dedication of emergency management agencies in helping get their communities ready for dangerous weather. We are proud to announce five new StormReady communities in our area:

- Chickasha, Oklahoma
- Kingfisher County, Oklahoma
- Woodward, Oklahoma
- Woodward County, Oklahoma
- Fort Sill, Oklahoma

The Fort Sill Army Base in Lawton became only the fifth military installation in the United States, and the first in the southern United States to be officially recognized as StormReady. The weather operations at Fort Sill are impressive and designed to help keep everyone on base safe and informed about hazardous weather. Congratulations to Fort Sill and to all of our new StormReady communities!

In addition, the first four communities to become StormReady in the NWS Norman county warning

were recently re-recognized:

- Moore, Oklahoma
- Ponca City, Oklahoma
- Ardmore, Oklahoma
- Burkburnett, Texas

As of this writing, there were 1111 StormReady recognitions in 50 states. Oklahoma has 64 StormReady designations, and Texas has 58 designations.

For more information on StormReady, visit the website at www.stormready.noaa.gov.

Cooperative Observer Notes

First Freeze of the Season

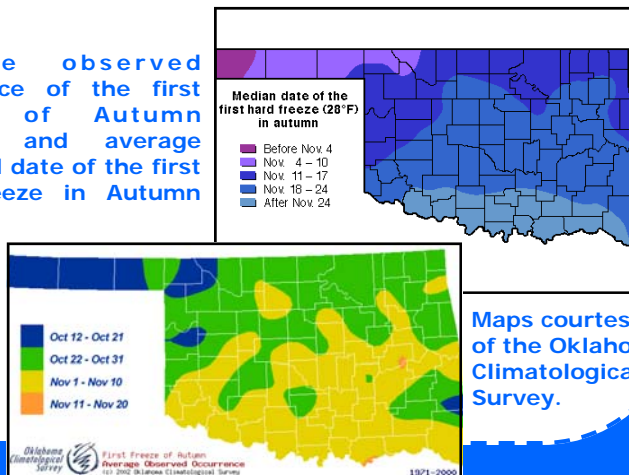
By Jennifer Palucki, Meteorologist Intern

Parts of northern and central Oklahoma felt the first signs in late October that winter is coming. Several of our cooperative observers woke up to below freezing temperatures for the first time this season during the mornings of October 21 and October 22. On October 22, several locations also felt not only the first freeze of the season, but also the first hard freeze of the season. A hard freeze is characterized by temperatures falling to or below 28°F over a widespread area and/or posing a threat to livestock and vegetation. Several of our observers that recorded a hard freeze also set low temperature records for October 22. Those stations are listed in the table below.

Station	Low Temp. Oct. 22	Previous Record	Records Kept Since
Billings	27	29 in 1990	1959
Fort Supply 1ESE	24	27 in 1993/1999	1940
Freedom	18	24 in 1990	1948
Helena	25	28 in 1911	1906
Jefferson	24	25 in 1990	1894
Mutual	24	27 in 1982	1915
Newkirk	26	28 in 1898/1952	1898
Ponca City	28	30 in 1990	1948

The first freeze in northern Oklahoma typically happens in mid to late October. However, the first hard freeze typically happens in early to mid November. The maps below show the average first freeze and first hard freeze dates for Oklahoma courtesy of the Oklahoma Climatological Survey.

Average observed occurrence of the first freeze of Autumn (below) and average observed date of the first hard freeze in Autumn (right).



Maps courtesy of the Oklahoma Climatological Survey.

Award Recipients

The following observer has recently received a Length of Service award:

Edith Freeman - 25 years

Thank you for your hard work and valuable meteorological data you have collected. We look forward to working with you for years to come.

New Observer

The NWS Staff would like to welcome Jim Fleming of Wewoka to the NWS Norman cooperative observer program. We look forward to working with this observer for many years to come.

Two Observers Retire

The NWS Staff would like to thank John Kimbrough of Henrietta, TX for his dedicated work. Mr. Kimbrough took temperature and precipitation measurements from NWS Norman for nearly 15 years. We would also like to thank Ladonna Kleuser of Cedardale, OK for her dedication to the cooperative observer program. Ms. Kleuser took precipitation measurements for NWS Norman for nearly 15 years. Thank you both for all of your hard work and best wishes to you!

In Memoriam

This summer two of our cooperative observers passed away. Gordon Worden of Elmore City took precipitation measurements for the Norman Forecast Office for over 10 years. Also, Mr. William Irvin Hill of Wetumka passed away after 34 years of dedicated service. These observers will truly be missed.

Remember to mail the previous month's cooperative observer forms and recording rain gage tapes by the 5th of the month!

The Norman NWS Cooperative Observer Program Team:

Daryl Williams

Forrest Mitchell

Jennifer Palucki

Ty Judd

John Pike



In This Issue:

- ⇒ National Weather Center Dedication
- ⇒ CoCoRaHS
- ⇒ Meet your Weatherman
- ⇒ Tales, Legends and Other Sayings
- ⇒ 100 Degree Days
- ⇒ Norman Office Forecast Notebook
- ⇒ StormReady News
- ⇒ Cooperative Observer Notes

National Weather Service Forecast Office Norman, OK

Phone Number:
405-325-3816

Web Page:
weather.gov/norman

Meteorologist-in-Charge:
Mike Foster

Warning Coordination Meteorologist:
Rick Smith

Science and Operations Officer:
David Andra

Editor:
Jennifer Palucki

National Weather Service Forecast Office
120 David L. Boren Blvd. Suite 2400
Norman, OK 73072

Check out our text-based and graphical
forecasts for your county at
weather.gov/norman.

Please share this with friends, relatives, and colleagues. Comments and suggestions are always appreciated, by phone at 405-325-3816 or by e-mail at Jennifer.Palucki@noaa.gov.