The Southern Plains Cyclone

A newsletter from your Norman Forecast Office for the residents of western and central Oklahoma and western north Texas



Also Featuring...



The Hammon, OK, Tornado What is a Derecho? Severe Weather Preparedness

Ocean Prediction Center



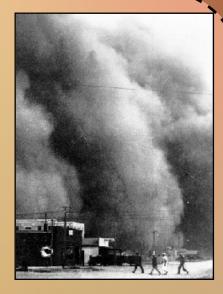
We Make the Difference...When it Matters Most!

The 75th Anniversary of Black Sunday

By Jenifer Bowen

Meteorologist Intern

April 14th, 2010, will mark the 75th anniversary of a Sunday afternoon in 1935, which saw one of the most devastating events in the history of the Great Plains. The dust storm of "Black Sunday" is considered one of the worst to affect the region during the exceptional drought of the 1930s. A billowing wave of topsoil that swept through the Plains that day became known as the "Black Blizzard." Typically, when people think of the term, "Black Sunday," the words "drought," "crop damage," and "suffering" immediately come to mind. Farmers had plowed and planted the soil for years with no consequence, but when the rainfall stopped in the summer of 1931, farmers continued to plow. For ten years, many residents in western Oklahoma (as well as surrounding states) suffered through continual dust storms and a devastating drought. Powerful winds carried away the topsoil for over one hundred million acres, hindering farmers from growing crops.



Dust covered cars, trees, and fences leaving many families stranded without adequate food and water. Many residents fled the area while some toughed out the storm to protect their home and way of life.

For twenty-seven days leading up to April 14th, 1935, dust storms had become a frequent occurrence. Most people, however, were not prepared for the great wall of black dust that would roll into Oklahoma and parts of Texas later that day. The morning began with record low temperatures for the month of April. It

was Palm Sunday and many families were occupied in cleaning themselves and their possessions of all the recently fallen dust, so that they could attend church services. Observations noted by individuals at the time allowed Mike Branick, present-day Senior Forecaster at the Norman NWS, to construct two graphics that depict the weather phenomena that caused this "duster" to be so intense compared to the others. At 7 AM a strong Canadian cold front was located over the Northern Plains moving rapidly south. High pressure had

See Sunday on page 2

Meet Your Weather man: Andrew Taylor



My path to becoming a general forecaster at the Norman office began on a farm in the Palouse area of eastern Washington. I remember being fascinated by weather in general as a child, but thunderstorms in particular were a treat to watch (yes, there ARE thunderstorms in eastern Washington!) I



visited the National Weather Service office in Spokane while I was in elementary

school, and decided afterward that I was pretty sure I wanted to work in a place like it when I grew up. My family and I moved to a house on a hilltop when I was thirteen years old, with

March 8th Hammon OK Tornado

A damaging tornado struck the town of Hammon, OK, in Roger Mills County, on March 8, 2010. It was the earliest in the year that a tornado has ever been documented in Roger Mills County. The event began early Monday afternoon as a strong up-

By Jenifer Bowen

Meteorologist Intern

per level low made its way eastward through the Texas Panhandle. As is common with spring storms, a broad area of rain and thunder rolled out ahead of the upper low starting in the early morning. This activity cleared out of western Oklahoma in time for afternoon heating. Highs were

Site Map

Organization

In the Southern Plains, severe weather in its windy, wintry, and thundery forms, is a fact of life In the spring and summer, we most often face severe thunderstorms. Anytime thunderstorms roll through our region, the event may include tornadoes, hail, damaging winds, flooding, or sometimes all of the above! The Norman Forecast Office works to continually update you on what we expect to occur and what has already occurred during severe weather events.

While NOAA All Hazards Weather Radio, and commercial radio and television remain excellent ways for you to monitor the weather, we realize that the internet is increasingly becoming one of the most efficient ways for us to reach our partners and public with critical information. The NWS Norman website is home to a host of links that display weather information through text, graphics, audio, and pictures. While weather enthusiasts will find in-depth weather data and descriptions, you don't have to be a meteorologist to make great use of our site. The NWS Norman web page represents a great tool or collection of tools that anyone can use to equip their self with up-to-the-minute weather and safety information. Many of our text-based and graphical forecasts and multimedia briefings are intended to serve those in the general public who may only want to know, "When do I need to take cover, and for how long?"

The enhanced page, at its core, presents a collection of graphics accompanied by a text-based headline and weather summary, all of which highlights current and upcoming weather events. The page background color uses a simple green, yellow, red scheme to let you know at a glance whether hazardous weather is occur-



ring somewhere in the NWS Norman forecast area. Forecasters often select "Yellow mode" during severe thunderstorms, snow and wind, heavy rain, and other hazardous conditions. If the enhanced page is yellow, you can bet there is a watch, advisory, or warning of some type in effect for an area near you. "Red mode" is seldom used (probably 5 or fewer times per year), and usually means that life-threatening weather is occurring right now! To access this page, perform the following:

From the main page, look for a link called "Enhanced Page" toward the upper end of a blue stripe on the left side of the page, or a link called "Click HERE for the Enhanced Page and Graphics" in the headline section at the top middle portion of the main page. Both links take you to the same place, our Enhanced Page.

Note that the NWS Norman Enhanced Page is designed to give you the most important weather information as quickly as possible. Many people, including emergency managers, begin their day by checking our Enhanced Page, and check back frequently during severe weather. If you could only bookmark one web page, this is the one we would recommend.

Three separate NEXRAD radars are located in the NWS Norman forecast area, one covering southwest OK and western north TX, another in central OK which also covers adjacent parts of southeast and western OK, and a third radar in northern OK. Depending on the area in which you live, click on the radar and you will be able to see the current radar reflectivity and velocity information over your area. Customizing the counties, rivers, or highways is simple by checking the white boxes located at the bottom of the radars. Radar interpretation, however, is difficult at times, even for the experts. Remember to look for "Storm View" graphicasts in which NWS Norman forecasters denote important radar features and describe what kind of weather is approaching you. When active, Storm View graphicasts will be located on the right hand side of the Enhanced Page. Click any of the smaller graphicasts to expand it into the main window in the center of the screen.

See Website on page 3

Website...from page 2

Or the Local Hazards page you will find severe and hazards weather information condensed into a smaller

area. It's a sort of "Just the Facts" version of the Enhanced Page, highlighting current watches, warnings, and advisories. If you select from the map the county or city you wish to view, a local forecast will appear as well as links to any warnings or watches issued for that area. If the link for an individual product is clicked, details of the watch or warning will be displayed. In addition to watches and warnings, this page provides viewers with real-time local storm reports, possible flood hazards, and a link to weather



safety. From the main web page, on the left side of the screen under the "Current hazards" heading, click "local."

City, St" or Zip Code

Black Sunday - April 14, 1935

Be a CoCoRaHS Observer!

Submit a Storm Repor

SCATTERED SHOWERS THIS AFTERNOON...ISOLATED THUNDER POSSIBLE

A popular NWS product called the Hazardous Weather Outlook (HWO) is issued by the Norman Forecast Office each day at 5 AM. The HWO is updated in the

Hazardous Weather Outlook

man Forecast Office each day at 5 AM. The HWO is updated in the mid to late morning (before noon) each and every day, and may be updated at other times when needed. From the "Local Hazards" page click on "Hazardous Weather Outlook" under the "local links" heading.

HWO text details any severe weather that will impact Oklahoma or western North Texas along with the timing, location, and recommended actions. The discussion sections are often in-depth and written for a slightly more technical audience. If you have attended storm spotter training, you should be familiar with the terms used in the HWO. If not, then reading the HWO can be one way to increase your knowledge. If you are instead looking for a quick message about hazardous weather without any guess work, look for a "Hazardous Weather Outlook" graphicast on the Enhanced Page. That graphicast will almost certainly be present any day that we are expecting an outbreak of severe weather.

Multi-Media Briefings

In addition to the products listed above, NWS Norman sometimes produces a "Multi-media Briefing." These briefings combine

graphics with the recorded voice of a NWS Meteorologist explaining an unfolding weather situation and associated safety information. A multi-media briefing may someday be a routine part of what we do, but for now their presence should indicate to you that the NWS expects a significant severe weather or winter weather episode soon. Viewing these briefings is an excellent way to stay informed and safe. Look for multi-media briefings to appear in the same way that a graphicast appears on the right hand side of the Enhanced Page. The multi-media briefing will always be the top of the "stack" of graphicasts.

If you ever have any questions about the tools or products on the NWS Norman website, feel free to contact our office at (405) 325-3816. We are available to help 24 hours a day, 365 days a year.

Questions?

Central Oklahoma SW OK/NW TX Northern Oklahoma Southern Plains Pick a Radar

Weather Synopsis...Rain chances will go up beginning this afternoon as moisture slowly shifts east over the area. The greatest chances this afternoon will be over western north Texas and southwest Oklahoma, with rain becoming likely over all but southeast Oklahoma on Friday. Some thunder is possible, but severe weather is not expected. Rainfall totals through Saturday night may exceed two inches in portions



Outlook

RAINFALL POTENTIAL THROUGH SATURDAY NIGHT

http://www.weather.gov/norman

ther Safety Prepared

Climate



http://www.srh.noaa.gov/oun

The 75th Anniversary of Black Sunday

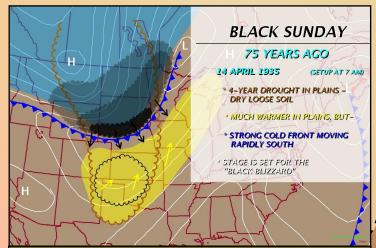
built over the Southern Plains, and with strong southerly winds temperatures warmed quickly during the day. In fact, in spite of the cool start that morning, the warmest readings of the month were observed that afternoon. By 5 PM eyewitnesses reported seeing a huge black cloud on the horizon. A resident of Perryton, TX, Donald Worster, recalled the black dust storm:

"Suddenly there appeared on the northern horizon a black blizzard, moving toward them; there was no sound, no wind, nothing but an immense 'boogery' cloud." Donald Worster, *Dust Bowl – The Southern Plains in the 1930s*.

From the Kansas Historical Society:

"As the wall of dust and sand struck our house the sun was instantly blotted out completely. Gravel particles clattered against the windows and pounded down on the roof. The floor shook with the impact of the wind, and the rafters creaked threateningly. We stood in our living room in pitch blackness. We were stunned. Never had we been in such all-enveloping blackness before, such impenetrable gloom." - Pauline Winkler Grey, *The Black Sunday of April 14, 1935*.

The cold front and accompanying black dust cloud tracked through Oklahoma at speeds up to 60 mph. As the cloud rolled over, daytime immediately turned to night with



One of two graphicasts issued by the National Weather Service in Norman on April 14, 2010, marking the 75th anniversary of "Black Sunday," the most infamous of dust storms that struck the Plains during the 1930s. The weather map drawn here is a recreation based on the Daily Weather Map for April 14, 1935, which is available from the National Oceanic and Atmospheric Administration's Central Library.

visibility quickly deteriorating to zero. Total darkness lasted anywhere from 12 minutes to 1 hour, depending on the location. Terrified families took refuge in basements and cellars in fear of the mysterious "black duster." The following day Robert Geiger, a reporter for the Associated Press, published an article in the *Lubbock Journal* recalling

BLACK SUNDAY

14 APRIL 1935, 6 PM

*AFTERNOON TEMPERATURES IN 805/90s, THEN...

*STRONG COLD FRONT

*MOVING SOUTH 50-60 MPH

WALL OF BLOWING DUST DAY TURNED INTO NIGHT,
ZERO VISIBILITY

*NEXT DAY, THE TERM
TOUST BOWLE WAS GREATED

The second of two graphicasts issued by the National Weather Service in Norman on April 14, 2010, marking the 75th anniversary of "Black Sunday," the most infamous of

dust storms that struck the Plains during the 1930s. Frontal position, timing, and density of the shaded areas that represent the dust storm are based on historical accounts and Daily Weather Map for April 14, 1935, which is available from the National Oceanic and

Atmospheric Administration's Central Library

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his experience as he was stuck in his vehicle during the storm. He coined the term dust bowl for the first time with the statement, "Residents of the southwestern **dust bowl** marked up another black duster today..." Since that time, there have been no other major dust storms to affect this part of the region. The words "dust bowl," are now iconic. They sum up an entire decade of drought and hardship, and conjure up images of rolling black clouds, abandoned and broken down farmsteads, and an exodus of Plains residents - defeated by the harsh weather.

In the decades since, there have been other exceptional droughts, such as those in the 1950s and middle 2000s. We have not, however, witnessed another dust bowl. Farmers adopted new methods to replenish the topsoil and keep it in place, and Oklahoma is now home to more man-made lakes than any other state. Droughts of varying duration and intensity are to be expected in the climate of the Great Plains. It is imperative to understand the dangers of prolonged droughts, and also to remember the hardships people here have endured in the past.

Hammon...from page 1



Photograph of the "Hammon Tornado" taken March 8, 2010, by storm spotter Scott Peake. This view includes the updraft of the miniature supercell that produced the tornado. An associated clear slot is evident between the tornado and the photographer and wrapping to the northeast (right side of the picture) side of the tornado.

only in the 60s, but this proved sufficient (when combined with the very cold air aloft) to support additional thunderstorms. A dryline provided the focus for development late in the afternoon.

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Owing to relatively mild surface temperatures and modest instability, these storms were not as tall or as wide as the large supercell storms that we see during the worst of tornado outbreaks. Organization of winds around the storms did, however, allow them to become super-

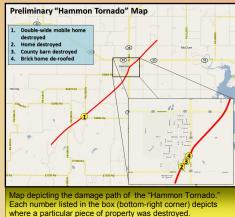
cells. Because of their smaller size. these storms are known as miniature supercells (or minisupercells). Two separate tornadoes developed. The first touched down southwest of Hammon at 5:20 pm CST and continued for 40 minutes. The track of the tornado was mainly over rural areas with minimal damage. Eventually, though, the tornado

reached the southeastern edge of Hammon, affecting four homes, a large barn, and equipment. Roofs were blown off homes and a barn owned by the Roger Mills County government was destroyed, as were the vehicles and equipment inside. Tree damage and downed power poles were also reported. Fortunately this tornado caused no injuries, but property and crop damage was estimated near one million dollars.

The second tornado to touch-

down after the "Hammon Tornado" was north of the town of Butler, OK. Luckily, this tornado lasted a very short time and produced no damage. In fact, the only evidence that this second tornado occurred was video provided to the National Weather Service by trained storm spotters.

The March 8th event was a perfect example of the importance of storm spotters. Since the deployment of the "NEXRAD" radars in the



mid 1990s, lead time for tornado warnings averages 13 to 18 minutes in various studies, and many more

See Hammon on page 8

Andrew...from page 1

unrestricted visibility to the south and west. It was a great vantage point from which to observe approaching weather of any kind.

When my junior year of high school came around and it was time to start thinking about college, it didn't take me long to decide that I wanted to earn a degree in meteorology. After high school, I moved to Salt Lake City to

**
Utah

attend the University of Utah. In addition to building a solid meteorology background in the classroom, I was able to witness plenty of lake effect snow events,

downslope wind events, and even a severe squall line. While in Utah, I was employed at the Salt Lake City forecast office as a Student Career Experience Program (SCEP) participant. I conducted balloon releases and worked on several projects with others in the office, one of which was a paper about the August 11, 1999 Salt Lake City tornado.

After finishing my bachelor's degree, I moved to Norman in August of 2001 and began work on a master's degree at the OU School of Meteorology. I earned my master's degree in December 2003, and then began work on a Ph.D. in earnest in late 2004. The research skills learned in graduate school are valuable, but my interests have al-

ways pointed toward operational meteorology and I spent much time waiting patiently for an opportunity to work with the National Weather Service again. That opportunity came in November 2007 when I joined the Norman office as an intern. I became a general forecaster at the Norman office in the summer of 2008.

I feel that working on a Ph.D. at OU while also working as a forecaster at the Norman WFO has placed me in a unique position to promote collaboration among the operational and research units within the National Weather Center (NWC). Currently, we are teaming with researchers at the National Severe Storms Laboratory

See Andrew on page 8

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

Multimedia Briefings Expanding to Cover

Storm spotters, that they like our multi-media

emergency managers, and the public keep telling us

the public keep telling us

briefings. These online presentations typically pair forecast graphics with the recorded voices of NWS meteorologists explaining a developing weather event. In the early stages while we were developing some familiarity with producing MM briefings they tended to be reserved for big events like a winter storm or severe thunderstorm outbreak. In spring of 2010, however, we began to produce more frequent briefings, and some with an educational theme. One briefing (pictured) described the differences between supercells and bow echoes; others have delivered tornado safety tips and heat safety tips. The possibilities are endless. We may one day be able to offer virtual storm spotter training, documentaries covering historic weather events, and, of course, detailed present-day forecast information, all in this multi-media format. If you have an idea for something that would help you, we'd love to hear it. E-mail sr-oun.webmaster@noaa.gov.



NPR Science Friday

On April 9, 2010, National Public Radio broadcast its "Science Friday" program live from the University of Oklahoma. A panel of scientists that included Greg Carbin, Warning Coordination Meteorologist at the Storm Prediction Center, discussed tornado-related research including VORTEX2, weathercasters and climate change, and wind power. You can listen to the recorded program at:

editors Note

Tornadoes, hailstorms, ten inches of rain in 6 hours... and that was just in Oklahoma City! Spring 2010, proved to be too much to keep up with. We will provide a summary of May and June's wild weather either in a speciall issue of its own or within the Summer 2010 issue. Coming Soon!!

http://www.sciencefritilay.com/program/archives/201004091

Recent OU Graduate Promoted

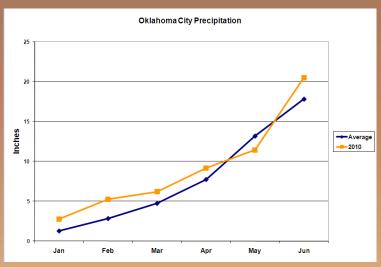
Another talented University of Oklahoma student and NWS Norman employee has received a promotion! You may recall having met Jenifer Bowen in our Fall 2009, issue. Jenifer graduated with a Bachelor's Degree in Meteorology this spring, but before she walked across the stage she had already

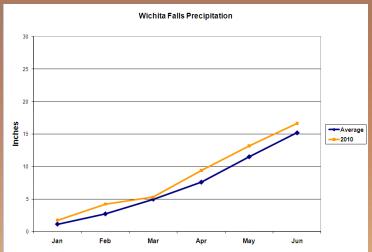


earned a full-time, entry-level position as Meteorologist Intern with the NWS Forecast Office in Topeka, KS. If there had only been a position available here in Norman, we would have tried to keep Jenifer. She was enthusiastic when helping out during severe weather, and she had begun to work passionately on articles for the Southern Plains Cyclone. In fact, Jenifer created much of the material, color schemes, and layout used in the Spring 2010 issue. It was inevitable, though, that Jenifer would take another step toward becoming an NWS forecaster. She is excited to have landed a job in Topeka so that she will still get to experience big storms on the Great Plains while remaining within a few hours drive of Oklahoma.

Thanks for the great work, Jenifer, and best of luck!

By the Numbers

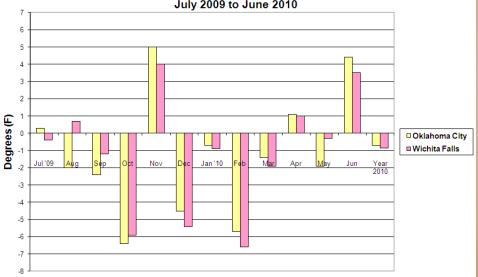




Precinitation

Living in a region that we know is prone to drought, there I is little reason to complain about the first six months of 2010. That is, of course, unless you live in a place such as northern suburbs of Oklahoma City which received between 8 and 12 I inches of rain in one morning on June 14th. That event pushed annual rainfall at Oklahoma City to about two and a half inches above average for the year. Otherwise, the trace for both Oklahoma City and Wichita Falls (orange on the graphs) stayed close to or a little above average through the first six months of the year. Wichita Falls did have I one very notable heavy rain event on April 17th. In what would have otherwise been a very dry April, Shepperd Air Force Base measured 3.45 inches on the 17th, breaking the previous record for that day of 1.56 inches set in 1988. The rest of the month only produced 0.67 inches, meaning 84 percent of April precipitation fell in one day at Wichita Falls.

Temperature Departure from Normal 12 Month Period July 2009 to June 2010



Temperature,

With the exception of a mild November, the second half of 2009, saw temperatures colder than average at Oklahoma City and Wichita Falls. This was especially true of a gray and rainy October (see the Fall 2009 issue for details). Going into 2010, the winter months were also colder than average, with seasonal snow records broken at Wichita Falls

and challenged at Oklahoma City. Temperatures warmed up a bit in what was a relatively dry April, and then really warmed up at the beginning of June. Overall, though, for the 12 month period ending in June 2010, both cities fell just shy of their respective average temperature.

NWS Teamwork: Ocean Prediction Center

By Vivek Mahale Student Employee (SCEP)

Adapted from information available online from the Ocean Prediction Center

One of the nine centers that comprise the National Centers for Environmental Prediction is the Ocean Prediction Center (OPC). The OPC is part of the National Oceanic Atmospheric Administration (NOAA) Science Center in Camp Springs, Maryland.

The OPC can be split into two branches—Ocean Forecast Branch and Ocean Applications Branch. The Ocean Forecast Branch's responsibilities include the issuance of marine warnings, graphical and text forecasts and quality controlling marine observations globally from ships and buoys for errors prior to being input to computer models. The Ocean Applications Branch investigates new technologies to enhance the operations of the Oceans Forecast Branch. Thus, the two branches of the OPC work jointly.

The OPC (through the Ocean Forecast Branch) covers forecasts for the North Atlantic Ocean from the west coast of Europe to the east coast of Canada and the U.S., and also the North Pacific Ocean from the west coast of Canada and the U.S. to the east coast of Asia. They define their

forecast domain as the Northern Hemisphere south of 67 degrees N to 15 degrees S (excepting the Indian Ocean). The OPC also provides forecast points in coordination with the National Hurricane Center (NHC) for Tropical Cyclones in the Atlantic



Ocean east of 60 degrees W and north of 20 degrees N. The OPC also serves as a backup operations center for the Tropical Prediction Center (TPC) and the Honolulu National Weather Service Office (which staffs the Pacific Hurricane Center at times of active tropical weather systems).

The primary goal of OPC forecasts is ensuring the safety of commercial and recreational fishing, boating, and shipping activities. This is accomplished via marine warnings and forecasts. The OPC issues warnings and forecast bulletins and graphics on a 24/7 basis up to five days in advance. Over 100 of these products are issued daily. The OPC has three levels of warning:

1) Gale force: 39-54 mph 2) Storm force: 55-74 mph 3) Hurricane force: >74 mph

The OPC has separate fore-cast bulletins for the offshore waters off the western and eastern United States and for the high seas of the Atlantic and Pacific Ocean. A Marine Weather Discussion is issued four times a day, and describes the fore-cast for the offshore waters and adjacent areas for the next five days. The High Seas Forecast - also issued four times a day - describes the winds and seas out to 36 hours and can include areas of dense fog and structural icing.

So those you who travel by sea or have an interest in weather over the oceans, check out NOAA's Ocean Prediction Center.

For More Information... http://www.ope.ncep.noaa.gov/

Hammon...from page 5

tornadoes are detected as compared with the pre-NEXRAD era. This is especially true of strong and violent tornadoes. The utility of radar data decreases, however, for small storms (i.e., mini-supercells or tropical supercells) and storms far from the nearest radar. The Hammon tornado was first detected not by the nearest radar (Frederick, OK), which is 91 miles away, but by



A view of tornado damage that occurred on the south side of Hammon, OK, on March 8, 2010, taken immediately after the damage occurred. The tornado can be seen moving northeast and away from the

storm spotters trained by the Norman National Weather Service in Roger Mills County. Spotter reports prompted the National Weather Service (NWS) in Norman to issue a tornado warning *before* the tornado became evident in radar data, and 28 minutes before it struck Hammon. This interaction between the NWS and trained spotters provided people in the path of this tornado more advanced warning than would have been possible with radar alone.

Cooperative Observer Notes from Black Sunday

One of the lasting records of the Dust Bowl comes from National Weather Service Cooperative Observers. The Cooperative network provided the Oklahoma City NWS Office with detailed temperature, dew point, and wind speed information prior to and during the Black Sunday event. Observers also recorded notes that have become a part of living history:

<u>Chattanooga</u>: "You will note I put in 3 days of dust. Honest I could not tell if it was cloudy or not, dust was all I could see so I put it down." 15th: "Dust storm PM" [ob time 7 PM?]

Hennessey (14th): "Dust storm from NW at 6 PM" [ob time 6 PM]

<u>Hooker</u>: "Most of month was very severe electric dust storms. Elect (?) and lack of moisture has killed about all the wheat." (14th) "430 severe dust storm" (15th): Bad dust storm"

<u>Kenton</u>: "The month was slightly warm and very dry. It was the driest April in history of Weather Bureau. It was probably one of the windiest months on record. Sandstorms and Dust Storms prevailed on at least 17 days to a marked (?) extent. Severe Dust Storm April 14th caused the afternoon to turn as dark as darkest possible night."

Stratford TX: "The 14th another duster black as night at 5:40. Stayed so for 20 minutes then got so you could see about 10 feet away and stayed so all night." (14th): "Worst dust storm"

Andrew...from page 5

(NSSL) to improve the performance of a numerical forecast model we run within our office. Additionally, Patrick Burke (the editor of this newsletter!) and I served as mentors for a student participating in the Research Experiences for Undergraduates program during summer 2010, at the NWC.

I finished my dissertation this spring and have now completed my Ph.D. In addition to the time I will now have in the forecast office to devote to projects, I'm looking forward to having some free time! My wife and I enjoy spending time outdoors, whether camping, hiking, or just going for a walk in our neighborhood. I very much enjoy travel...I have visited 46 states and have been to Europe twice. I have made many close friends since moving to Oklahoma and am honored to help protect life and property in a region of the U.S. with such active weather.

What is a Derecho?

A Derecho is a type of severe weather phenomena that is defined as a straight-line windstorm that is produced with a line of rapidly moving severe thunderstorms. It is typically long-lived and associated with a squall line that is curved in shape. Derechos are a particularly dangerous type of storm that must meet certain criteria. The storm movement of a derecho is typically from 50 to 70 mph with sustained wind speeds greater than 57 mph at different points along the path. However it's not uncommon to see wind speeds exceed 100 m ph. Derechos typically occur during the late spring and early summer when severe weather is most

common and is seen along two distinct axes. The first axis is located in the Midwest Region of the United States from the upper Mississippi Valley to the upper Ohio Valley.

Weather Words

The second axis stretches from the southern Plains into the Mississippi Valley. Similar to severe thunderstorms, derechos can be a serious threat to people in its path. An example of a deadly derecho event in Oklahoma occurred on May 27-28, 2001. Oklahoma experienced a severe squall line with embedded derechos that developed in southwestern Kansas and raced southeastward through the evening hours, producing winds as strong as 94 mph in the Oklahoma City Metro. Overall, property damage was well over \$100,000 and unfortunately there was one fatality from a fallen pole in Lawton, Oklahoma.



COOP Observer Notes

Length of Service Awards

Wayne Bobinson Bob Bratton Don Wilson Poe Family

DD **Sayre, OK** Mangum, OK Blanchard, OK-288W Ada, OK

10 Years 15 Years 25 Years 30 Years

By serving the in the NWS Observer Program for his 55th straight year, Ernest Muncrief of Duncan, OK, recently earned the Benjamin Franklin Award, a 55-year length of service award. Daryl Williams, a NWS Hy-

min Franklin Award, a 55year length of service award.
Daryl Williams, a NWS Hydrometeorological Technician and Cooperative Program liason, presented Muncrief with the award at the
Marlow Lions Club meeting on May 5, 2010.

Muncrief began taking temperature and precipitation measurements in February 1955, and was



National Weather Service Hydrometeorological Technician, Dary Williams (left) presents Ernest Muncrief (right) of Duncan, OK, with the Benjamin Franklin Award for 55 years of Cooperative Program service.

extreme temperatures. When it is raining I am checking the gauge about three times a day."

He added that, "The worst problem had to



Dunean, OK 55 Years

have been the ice storm that we just had," Muncrief said. "I had to check back in every day and bring the gauge in and thaw it out. I had enough hot water to thaw it out but on the last call I ran out so I had to estimate."

The same story quotes Williams as saying that it does not get any better than having a volunteer like Muncrief. "I cannot say enough good things about Ernest. He is an outstanding person. Having someone who logs weather for us for a few months is a nice thing to have, but to have someone like Ernest for 55 years is amazing."

This is not the first time that Muncrief has been honored for his service. He has received the John Campanius Holm Award and the Thomas Jefferson Award. The latter is the most prestigious honor given by NWS Cooperative Program, and is awarded nationally to only five observers per year.

The Norman NWS Cooperative Observer Program Team:

quoted in a

saying, "...I

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do. I check

about once

unless it is

Duncan

Banner

story as

have al-

ways en-

the tem-

perature

a day

Forrest Mitchell Daryl Williams Ty Judd John Pike Christine Riley



Thanks for Reading!

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:

Patrick Burke

Graphical and Written Forecasts & Warnings for Your Community:

weathergov/norman/enhanced.php



Tour our office and the National Weather Center:

nwc.ou.edu/tourdetails.php

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