

# Storm spotter

National Weather Service  
Wichita, KS  
Spring 2005 Newsletter

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*Figure 1. Picture taken outside NWS Wichita office during January 3-4 ice storm.*

## **Worst Ice Storm in Nearly 25 Years Ravages Area**

by Eric Schminke, Forecaster

The worst ice storm since 1982 ravaged all of Central and most of South-Central Kansas from the afternoon of January 4<sup>th</sup> thru the morning of the 5<sup>th</sup>. This storm coated almost the entire Wichita County Warning Area with ½ to 1 inch of ice. Although freezing rain was the primary culprit, the winter storm was magnified considerably by periods of sleet that accumulated to 1-2 inch depths. In Central Kansas, the situation was further worsened by periods of snow that accumulated to 3-5 inch depths in Russell, Lincoln and Saline counties.

Damage to trees and power lines was major! In the latter case, the damage resulted both from heavy ice accumulations as well as from trees and limbs that fell onto the power lines. Trees as tall as 22 feet were split or fell, and 6-12 inch diameter limbs fell in numerous locations, including onto roads and highways. Power outages were widespread and prolonged, with many towns experiencing multiple power outages that, in some cases, lasted 1 ½ weeks. In some cases, power outages recurred 1-2 days after the winter storm had ended when melting ice fell from power lines. Countless residents were forced to evacuate their homes, seeking refuge in hotels

and designated shelters. Fires posed major problems, and were ignited primarily by power lines falling onto trees and houses.

Hardest hit were Butler and Sedgwick counties. In Butler County, the ice storm caused an estimated \$8,552,945 in damage; Sedgwick County tallied \$15 million with \$7.5 million in Wichita alone. Three other counties also had over 1 million dollars in damage. Those counties include: Harvey at \$3.3 million, Harper at \$1.73 million and Kingman at \$1.19 million.

Countless accidents occurred, and were not only traffic-related, but also occurred during the extensive cleanup that followed. Three people died, and two were seriously injured. Of the fatalities, two were due to carbon monoxide poisoning from portable generators. The 3<sup>rd</sup> fatality resulted when an elderly man died while trying to remove downed tree limbs. Of the two seriously injured people, one occurred when a man sustained head and neck injuries when a 15-foot limb fell on him as he was sawing it. The 2<sup>nd</sup> occurred when a power line crewman came into contact with a 12,700 volt power line.

On the 5<sup>th</sup>, the ice storm invaded Southeast Kansas, spreading a mixture of sleet and freezing rain across every county except Labette. Ice accumulations of 1-2 inches brought eight of the nine Southeast Kansas counties in WFO Wichita's jurisdiction to a halt.

Assistance from around the country was terrific, as approximately 370 crews from 15 states assisted WESTAR Energy with power restoration. Working 12-16 hour days, the crews responded from as far as Illinois, Indiana, Kentucky, Minnesota, New Mexico, South Texas, Tennessee, and West Virginia.

Equally terrific was the support the National Weather Service received from Emergency Management, law enforcement, and a dedicated storm spotter network. The timely and detailed reports you folks provided, enabled us to provide the broadcast media and general public with frequent local storm reports that kept all apprised to the severity of the winter storm. Your dedication to all facets of severe weather, be it tornadoes, severe thunderstorms, flash floods, or winter storms, is obvious. Your work also enabled the Storm Data statistician to assemble a detailed report to National Weather Service Headquarters in Washington which drew widespread attention.

Kansas Governor Kathleen Sebelius issued a declaration of state disaster emergency to 56 counties, of which 20 are in the Wichita County Warning Area. A federal disaster declaration was expected to be issued.

The meteorology behind this ice storm was due to a strong cold front that surged south across Kansas and Oklahoma before stalling along/near the Red River the afternoon of January 4<sup>th</sup>. This provided a very shallow layer of below freezing temperatures to spread south over all except extreme Southeast Kansas. Meanwhile, an upper level system in western Kansas brought warm and very moist air above this layer of below freezing temperatures.

Before this ice storm, we had a couple of snow events. The first snow event of the 2004-05 season occurred on November 23<sup>rd</sup> when a band of heavy, wet snow accumulated to 4-6 inch

depths along a 50-mile wide swath that covered parts of Southeast Ellsworth, Eastern Rice, Northeast Reno, Northern McPherson, and Southern Saline counties. An estimated \$20,000 damage to trees and power lines resulted from this event.

The Thanksgiving holiday signed off with another flurry of activity on November 28<sup>th</sup>, when another 4-6 inches of snow fell in a band that stretched from along the Ellsworth/Rice county line east into McPherson County. Each of these counties received comparable snowfall just five days earlier, which brought total accumulations between 8-12 inches.

Since the now infamous “Ice Storm of 2005”, quiet weather has prevailed across the Wichita County Warning Area. However, one is urged to keep a close eye on the sky, for March can prove quite lethal, both in terms of ice and snow.

## **The Udall Tornado May 25, 1955**

by Dick Elder, Meteorologist in Charge

This May 25<sup>th</sup> we will commemorate the 50<sup>th</sup> anniversary of the Udall, Kansas Tornado. This is the deadliest tornado event to occur in the state of Kansas. 80 people lost their life that faithful day and another 250 were injured. Property damage at that time was \$2,225,000.00. In today’s dollars, that equates to over \$15,000,000.00. When this storm moved into Kansas, it had already killed 20 people and injured another 250 in Blackwell, OK. Then the storm system that produced this Killer Tornado knocked a giant B-36 bomber out of the sky near Sterling, TX and killed its 15 man crew.

Since tornado records have been kept, the 80 deaths that are associated with the “Udall Tornado” make it the 23<sup>rd</sup> deadliest tornado event to occur in the U.S. However, if you add the additional 35 deaths from Oklahoma and Texas, it then ties with the Flint, MI tornado of June 8, 1953, as the 9<sup>th</sup> deadliest event with 115 losing their life. The deadliest tornado event recorded in the U.S. was the Tri-State tornado that struck parts of Missouri, Illinois and Indiana on March 18, 1925, where 695 people were killed.

The “Udall Tornado” nearly leveled that community and affected most of its 610 residents. The tornado struck at 10:35 pm, when people were either in, or preparing to go to bed. Finally, it struck with little or no warning because personnel that were working at the “Weather Bureau” Office in Wichita did not know that the tornado had hit Udall until 11:45 pm, an hour and ten minutes after the fact.

One must remember in 1955 the radars that meteorologists had to work with were not nearly as sophisticated as they are today. Understanding the physical make-up of a tornadic storm and identifying that on radar was still several years away. However, telephones were rather common in most homes, but relaying weather information to emergency officials was not common practice at that time, even though people were observing the tornado. For instance, here are some of the observations people made that night, but never reported until well after the fact:

8:55 PM	Tornado on the ground 1 mile east of Tonkawa, OK
9:00 PM	Worst hail in the history of the city reported at Tonkawa, OK
9:27 PM	Tornado hits Blackwell, OK, considerable damage.
9:58 PM	Tornado on the ground 8 miles west of Arkansas City
10:10 PM	Hen Egg size hail 8 miles west northwest of Arkansas City. Tornado on the ground to their north.
10:20 PM	Tornado on the ground just north of Oxford, considerable damage.
10:35 PM	Tornado hits Udall.

If this information had been received by emergency officials, the “Weather Bureau”, and the media, could the deadly effects of this tornado be reduced? One will never know. However, it did begin efforts in Kansas to start educating the general public in spotting and reporting tornadoes. The first public Severe Weather Spotter Talk offered by the Wichita Weather Service Office was held March 8, 1959 in Wellington, Kansas. Since that time, each spring, the National Weather Service, in cooperation with county emergency management officials and the media, has offered Severe Weather Spotter Training. The goal of this training is to teach people to identify tornado and severe thunderstorm traits, the importance of communicating to others what they observe, and what they should do to protect themselves.

This spring, let us all remember that tornadoes, the strength of the one that hit Udall, can occur again in Kansas. Further, let’s learn from the Udall event and ensure we are ready when the threat of severe weather is at hand. Attend one of the National Weather Service Spotter Training Sessions. Keep an “Eye on the Skies” when severe weather threatens. When you see a tornado, flooding, large hail or high winds, take the time to report that to emergency officials and the National Weather Service, so we can get the word out to others that may be effected. Like the old saying goes; “We can’t keep severe weather from occurring, but working together, we can save lives.”

**Wichita to Host Exciting Regional Storm Conference**  
**by Chance Hayes, Warning Coordination Meteorologist**



**Air Capital's Mid-America Storm Symposium**

The Wichita, Kansas, Chapter of the American Meteorological Society is pleased to announce plans for the Air Capital’s Mid-America Storm Symposium (AIRMASS 2005). This will be a 2-day regional science-sharing conference, to be held April 14-15 2005 at the historic Radisson Broadview Hotel in downtown Wichita. The purpose of the conference is to bring government and private sector meteorologists, media meteorologists, university teachers and students, storm spotters/chasers, and other weather enthusiasts together to share science. The focus is on new

tools, techniques, and ideas for improved forecasting and warning of hazardous weather conditions that affect the central United States. These conditions include severe thunderstorms and tornadoes, floods, winter storms, and aviation hazards.

A highlight of the conference is the commemoration of the 50<sup>th</sup> anniversary of the deadly Udall, Kansas tornado. This historic event will be reviewed, along with the history of the warning program, weather radar, and the spotter program. We will have several guest speakers, including renowned radar expert Don Burgess of the National Severe Storms Lab (retired).

Another highlight of the conference will be the banquet dinner at the world renowned Kansas Cosmosphere and Space Center in Hutchinson during the evening of April 14<sup>th</sup>. In addition to a banquet dinner and access to the museum, Dr. Hugh Christian of the Lightning Research Team (at Marshall Space Flight Center) will give a presentation on lightning research from space. Transportation to and from the Cosmosphere will be available from the Radisson Broadview Hotel.

For more details about the conference, please refer to the following web site: [www.wichita-amsnwa.org](http://www.wichita-amsnwa.org) and click on AIRMASS 2005.

## **Community Based Spotter Core Values**

by Chance Hayes Warning Coordination Meteorologist

Your duty as a volunteer community based spotter is extremely important to us at the NWS. You are basically our eyes in the field. Your reports to the NWS are vital in the hierarchy of communications. It is your report that gets peoples attention, aids the warning forecaster, and helps to save lives and property. So, as we move into this severe weather season I hope that you keep these core values in mind and fulfill your role as a community based spotter.

- ☛ **Am Aware of the Expected Weather**
- ☛ **Am Trained at Recognizing Significant Weather**
- ☛ **Am Dedicated to Reporting the Significant Weather I Observe**
- ☛ **Will ensure that those that I am associated with, as well as me, Will Stay Safe during Significant Weather.**

## **Importance of Spotter Reports**

by Chance Hayes Warning Coordination Meteorologist

Thanks for taking the time this past fall in helping us keep our volunteer spotter data base up to date. Your information has always been crucial in the warning decision process, however, now it takes on a new precedence. We were able to accurately display your location in relation to a thunderstorm based on the latitude and longitude coordinates for your address. This should help us to refine our warning decision process.

Real time spotter reports are extremely valuable. These reports time reports can be transmitted immediately to NOAA All-Hazards Weather Radio, and the media, to provide those in harms

way with up to date information on the storms location, strength, and history. Delayed, or after the fact reports, are also crucial. You may provide information on a storm that we have yet to hear about. It also allows the NWS to more accurately assess our performance during a severe weather event. Listed below, you will see the different ways in which you may contact us.

**☎ Telephone**

- 1-800-367-5736

**☎ Internet**

- Espotter
  - [www.crh.noaa.gov/spotter](http://www.crh.noaa.gov/spotter)
  - Be sure to request access to the system first.

**2004 Cooperative Observer Awards**

by Gloria Dill, Administrative Assistant

The following Cooperative Observers were presented 2004 Length of Service Awards by the National Weather Service. We would like to thank and congratulate them for their dedication and volunteering their time in providing us with climatic data. It is greatly appreciated!!

<b>Observer</b>	<b>Station</b>	<b>Years</b>	<b>Service</b>	<b>Given By</b>	<b>Date Given</b>
Areletta Koehn	Burns	10	Precipitation	Michael (Joe) Rosner	September 14
Jerald Steiner	Claflin	10	Precipitation	Michael (Joe) Rosner	September 24
Arthur Hoch	McPherson	10	Precipitation Temperature	Michael (Joe) Rosner	May 25
Dwight A. Dirks	Durham	10	Precipitation	Michael (Joe) Rosner	June 2
Peggy Bewley	Thrall 4S	15	Precipitation	Leon Wasinger	March 9
Linda Noakes	Erie 1N	20	Precipitation	Leon Wasinger	June 25
Darlene A. Smith	Luray	20	Precipitation	Michael (Joe) Rosner	May 26
Clifford R. Jordan	Great Bend	25	Precipitation Temperature	Michael (Joe) Rosner	May 5
Beverly Ditty	Virgil	25	Precipitation	Leon Wasinger	May 18
Edwin H. Andres	Elbing	35	Precipitation	Leon Wasinger Dick Elder Gloria Dill	April 30

## **FUJITA TORNADO SCALE**

### **F0 Category Tornado 40-72 mph**

Light Damage: Some damage to chimneys; pushes over shallow-rooted trees; damages signboards; some windows broken; hurricane wind speed begins at 73 mph.

### **F1 Category Tornado 73-112 mph**

Moderate Tornado. Peels surfaces off roofs; mobile homes pushed off foundations or overturned; outbuildings demolished; moving autos pushed off the roads; trees snapped or broken.

### **F2 Category Tornado 113-157 mph**

Considerable damage: Roofs torn off frame houses; mobile homes demolished; frame houses with weak foundations lifted and moved; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.

### **F3 Category Tornado 158-206 mph**

Severe Tornado. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forests uprooted; heavy cars lifted off the ground and thrown.

### **F4 Category Tornado 207-260 mph**

Devastating damage: Well constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and disintegrated; large missiles generated; trees in forest uprooted and carried some distance away.

### **F5 Category Tornado 261-318 mph**

Incredible damage: Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 300 ft (100 m); trees debarked; incredible phenomena will occur.

Comments and suggestions are always welcome.

Please phone, e-mail or mail us at:

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You can also view this newsletter on-line at:[www.crh.noaa.gov/ict](http://www.crh.noaa.gov/ict)

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