



# High Plains WIND

(Weather Information News Data)



May 1, 2007

Volume 1, Number 1

## In This Issue

Welcome..... 1  
 Cooperative Observers.....2-3  
 CoCoRaHS .....4-5  
 News Stories.....5-8



## Contact Us

**National Weather Service**  
 920 Armory Road  
 Goodland, KS 67735  
 785-899-6412

<http://www.crh.noaa.gov/gld>

## Chief Contributors:

Lawrence Boyd, OPL  
 David Floyd, WCM  
 Kelly James, Met Intern  
 Scott Mentzer, MIC

*See this tornado story on page 8*



## A Message from the Meteorologist-in-Charge

Welcome to the inaugural edition of the High Plains WIND, a quarterly newsletter produced by the National Weather Service office in Goodland, Kansas. Though anyone who is interested in High Plains weather has access to this newsletter, I really want to reach the hundreds of volunteers who help us provide weather services across northwest Kansas, eastern Colorado, and southwest Nebraska. These volunteer groups include: official Cooperative Observers who provide official data for inclusion into our country's historical climate database; observers in the Collaborate Community Rain, Hail, and Snow (CoCoRaHS) who provide us with supplemental rain and snow information; trained storm spotters who provide us with critical severe weather information during hazardous weather; and amateur radio operators who provide an important communications link between our office and the outside world. All of these groups assist the men and women of the National Weather Service do their job better.

So, what is the job of the National Weather Service? Our mission is to: 1) help save lives and property, and 2) enhance the national economy. We achieve these goals by issuing timely and accurate warnings, advisories, and forecasts. We also maintain the climatic record which is used in atmospheric and hydrologic research, global and local monitoring of weather conditions, and modeling of the atmosphere.

This newsletter will inform our volunteer groups about what is happening at our office, provide some perspective about recent significant storms, and give useful tips to help observe the weather. I think you will find these articles useful and informative, and you should also discover how important the information you provide is to our operations.

If you are a volunteer, I want to take this opportunity to thank you for all your time and effort. Your dedication and service makes a huge and positive difference at our office.

Scott Mentzer,  
 Meteorologist-in-Charge

---

This newsletter is available at:  
<http://www.crh.noaa.gov/images/gld/pdf/newsletter0507.pdf>



**Springtime is here! It's time to put your funnels back on the rain gauges and Fischer-Porters.**

### **Coop News from the Desk of Larry Boyd....**

**Wow! What a snow season! You guys were wonderful too. All your snowfall measurements were greatly needed and useful. In fact, they were very much a contributing factor for many areas to receive money from the government. Great Job All!!!**

### **Dresden Observer Passes**

**I am saddened to report that our coop observer in Dresden, Kansas passed away this winter. Don A. Sulzman served our office for over 22 years and kept neat and timely weather observations. Don's wife, Lillian, will continue to take observations for us. Thank you very much Lillian! Our thoughts and prayers go out to you and your family.**

### **How Coop Data and Observations Are Used**

Your observations don't collect dust when you send them to the NWS. They are used in real-time forecasts and warnings. Published station data go to NOAA's National Climatic Data Center (NCDC) for processing, quality control, archiving, and publication. Much of the data are available to users via publications, special orders, and the Internet. In fact, your data are one of the most requested products in our national climate archives.

Coop data is used by economists in key decision-making. Engineers use your data to determine the depth needed to ensure stable home foundations, the slope of highways to ensure adequate runoff, the size of storm drains and the requirements for dams. Businesses use the data to decide where to site recreational facilities, when and where to hold conferences and many other applications.

Your data also form the basis for studies of climate variability and change in the United States. Your Coop data influences billions of dollars related to socio-economic decisions. Don't forget, this data gets more valuable with time. The longer the record, the more informed we become. Keep up the great work! Our entire country will continue to reap the benefits for generations to come.



**Patricia Hackert** of Palisade, NE, received her 20 Year Length of Service Award from Larry Boyd, OPL, NWS Goodland, KS.

Her husband had taken the observations there 30 years previously, so together they have 50 years of observations from Palisade.

**Gary Hibbs**, Coop Observer Rexford, KS, received his 15 Year Length of Service Award from Larry Boyd, OPL, NWS Goodland, KS.



A crowd gathered in Cheyenne Wells, CO, as NWS Goodland, KS, paid tribute to three of its volunteer weather observers in Cheyenne County, CO. Goodland MIC Scott Mentzer and OPL Leader Larry Boyd presented the awards. Receiving awards were **Archie Cloud**, of Kit Carson, for 10 years of service; **Clement Mitchell**, of Cheyenne Wells, for 35 years of service; and **Carl Lovell**, of Arapahoe, for 45 years of dedication. Each observer received a certificate and a pin. Carl also received a letter from NWS Director D.L. Johnson thanking him for his many years of public service and loyalty.

If you haven't heard already, our coop stations at Arapahoe 14N and Flagler 16NNW in Colorado have been closed. Louis Box moved to Nebraska and Jim and Kathy Ostrowski sold their farm. We are sorry to see them go.

Marvin Martin will be our new coop observer in Oberlin. KS. He will also be taking river stage readings on the Sappa Creek just south of Oberlin. Thanks Marvin!

We are sorry to hear the passing of Debbie Swanson's mother in February. Debbie and her daughter Faith are our observers in Indianola 1S, NE.

Archie Cloud, our coop observer at Kit Carson 9NNE, will be going in for knee surgery in Kansas City at the end of April. We wish you a successful surgery and speedy recovery Arch!

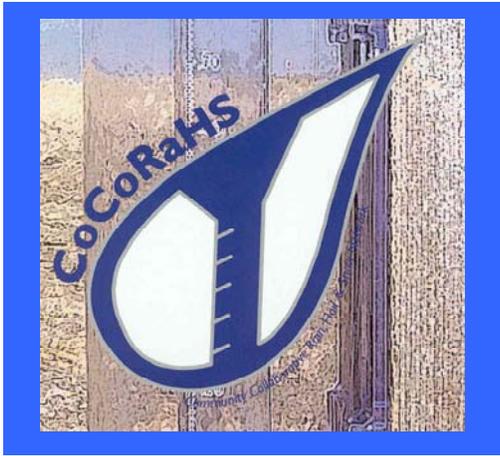
# *Are you Cuckoo for CoCoRaHS?*

## **Background**

The idea of studying precipitation and researching hail began in the summer of 1997 at the Colorado Climate Center in Fort Collins, Colorado. The program started out with two high school students testing and researching ways to get better data on hail severity, frequency, and risk. During this summer of research, an amazing flash flood struck the city of Fort Collins. The storm that brought the flash flooding was highly localized and the precipitation across the city of Fort Collins ranged from 14 inches to less than 2 inches within the city limits. This is when Nolan Doesken, founder of CoCoRaHS, decided that a high definition rainfall network was needed. CoCoRaHS was founded with the help of a few high school volunteers. Soon the word spread about the precipitation study and reports began to filter in all across Fort Collins and throughout the county. The reports verified what had been suspected, regardless of the season, there is a large variation in precipitation from almost every storm.

## **CoCoRaHS Today**

Today the Community, Collaborative Rain, Hail, and Snow Network (CoCoRaHS) program is operating in seventeen states with over 3,500 observers with more states joining every month. It is comprised of thousands of enthusiastic volunteers who take daily measurements of precipitation and hail. The information and data collected from the volunteers is unique in the fact that the program only studies precipitation. The data collected is used in a variety of ways. For example, city utilities use the data to assess the water supply and demand. Cooperative Extension Offices and USDA use the data in rural areas to assess precipitation and its departure from average for drought outlooks. Scientists studying the West Nile virus use the data to determine mosquito reproduction probabilities. The National Weather Service offices use the data to verify storm precipitation amounts. Many schoolteachers use CoCoRaHS data for classroom exercises. Finally, even NASA has used the hail pad data to study the impact of hail on the Kennedy Space Center and on the Space Shuttle. The data is even being studied to hopefully answer the age old question “do some areas routinely get hit harder with heavy rain and hail than other locations?”



## The future for CoCoRaHS

As the CoCoRaHS program continues to grow, its mission will continue to be focused on creating a highly dense network of volunteers to collect precipitation data. The need for such a network is apparent and will always be very valuable to many different individuals and industries. What makes CoCoRaHS so appealing is the fact that no matter how old or young you are, all you need is an enthusiasm for watching and reporting weather to participate. If you would like more information about CoCoRaHS or would like to volunteer, please visit <http://www.cocorahs.org/>.



On October 28, 2006, during the Open House festivities at the Goodland National Weather Service, children released approximately 100 balloons. Each balloon had a postcard attached. The children filled out the card with their own name and address before the release. The card asked that anyone finding the balloon note the location where the balloon landed and mail it back to the child.

Recently a young man from Goodland received his card in the mail. His balloon had traveled south over 150 miles to Greensburg, Kansas. A rancher had found the balloon 8 miles south of Greensburg while fixing fence. The rancher wrote, "It must have decided it was time to land!"

Pictured at left is Scott Mentzer, Meteorologist-in-Charge of the Goodland office, presenting the young man with a certificate for being the first to return a card to the office. Asked if he was interested in meteorology as a career, the boy said, "I might be now!"

### Questions?

We're as close as your email. Please write to us at:  
[w-gld.webmaster@noaa.gov](mailto:w-gld.webmaster@noaa.gov)  
or  
call us at 785-899-6412!





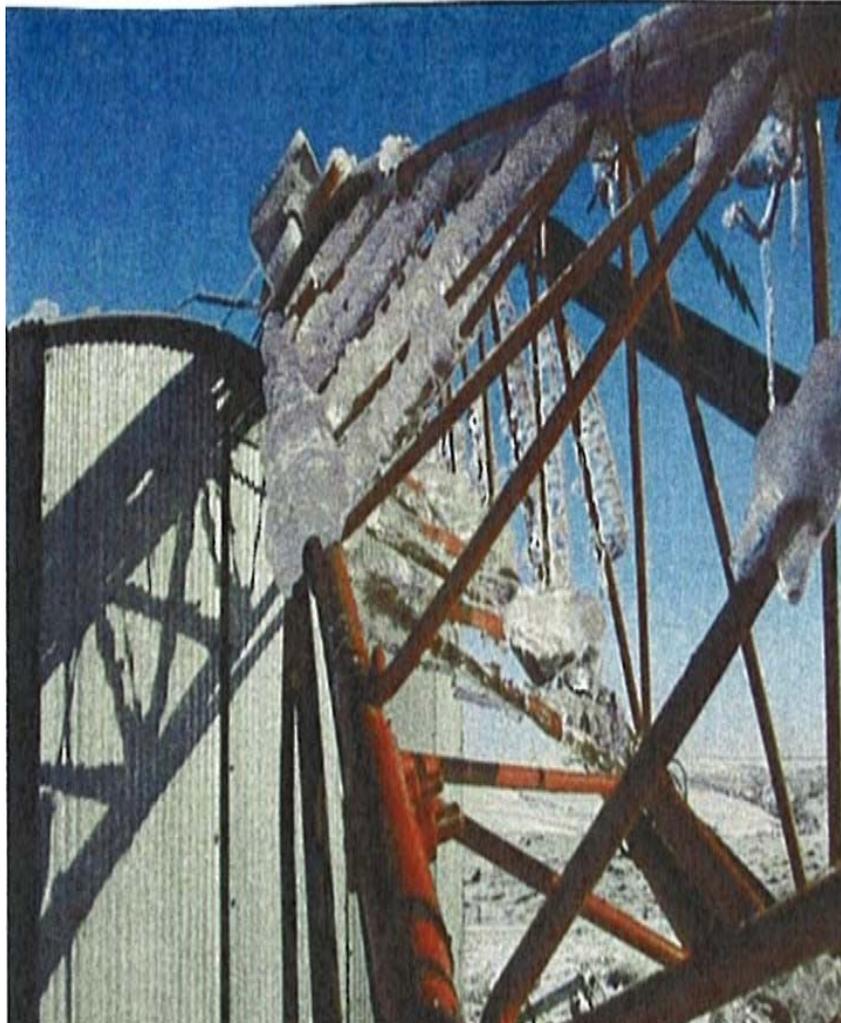
Is your  
community  
StormReady?  
For more  
information,  
contact David  
Floyd at  
785-899-6412.

Pictured above are Judy McKee, Crissy Conger, and Gary Rogers, staff of the Sherman County Emergency Management office.

Sherman County was recently awarded StormReady status at a ceremony in Goodland, Kansas, on Thursday, April 26, 2007.

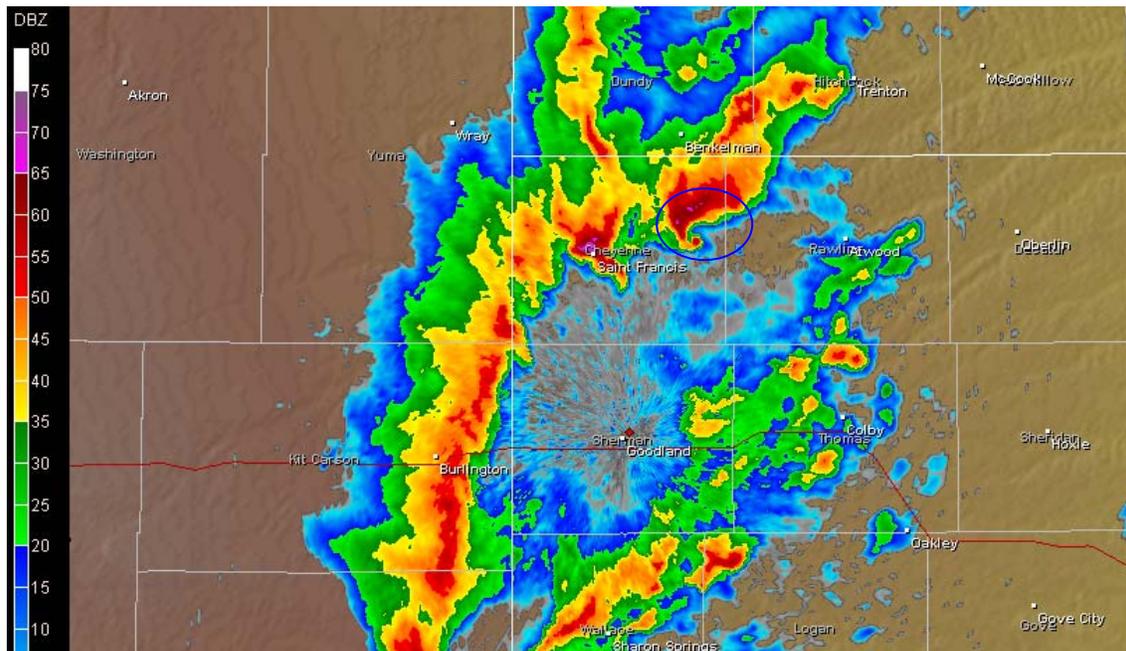
Sherman County is now one of 1,173 StormReady communities across the United States and one of 21 StormReady communities in Kansas.





## Nex-Tech Wins Mark Trail Award

A major blizzard and ice storm moved across northwest Kansas from December 28 through December 30, 2006. The storm produced between two and three feet of snow over many locations across the area and coated other areas with a layer of ice one to two inches thick. On December 30, 2006, local emergency response teams discovered that the 400-foot NOAA Weather Radio transmitter (WWF87) tower in Lenora, Kansas, collapsed due to the weight of ice (pictured above). Further, the building that housed the transmitter was destroyed. Despite snowdrifts of four feet, a team of radio technicians, led by Ryan McClung, erected a temporary tower and shelter to house the WWF87 transmitter on January 5, 2007. Though the tower was only 50 feet high, the transmitter signal was strong enough to be heard in the communities of Hill City, Norton, and Lenora. Without this temporary solution, the transmitter would have been off the air for 8-12 weeks. Ryan will accept the Mark Trail award on behalf of Nex-Tech at a ceremony to be held on Capitol Hill in Washington, D.C. in June 2007. For more information, please check out the story on our website.



## March 2007 Tornado Outbreak

A major tornado outbreak occurred across portions of southwest Nebraska and extreme northwest Kansas on the evening of March 28, 2007. A cold front moved east and stalled along the Colorado-Kansas border during the evening hours. Warm, moist, and unstable air east of the front set the stage for explosive thunderstorm development. Atmospheric conditions that day led to thunderstorm rotation, which ultimately resulted in tornado formation. By the end of the day, a total of 16 tornadoes tracked across northwest Kansas and southwest Nebraska.

**This is the highest number of tornadoes reported across northwest Kansas, southwest Nebraska, and eastern Colorado in any one day dating back to 1880.** This event surpasses the October 31, 2000, Halloween tornado outbreak, which produced 10 tornadoes.

The strongest tornado moved from northeast Sherman County into eastern Cheyenne County Kansas. This tornado had a path length of 36 miles and was up to a half mile wide at times. Four homes in the path of this tornado were significantly damaged with many of them losing roofs, garages, and sections of outside walls. This tornado dissipated near road AA, west of route 161 in northern Cheyenne County. A second tornado quickly formed about three miles to the northeast, tracked northward to just east of Benkelman, Nebraska, and damaged three homes and produced major tree damage at the golf course east of Benkelman.

This event was one of the earliest tornado outbreaks in the region, more than doubling the number of tornadoes recorded in the month of March in the Goodland County Warning Area (CWA). Prior to this event, there were only 11 March tornadoes on record, occurring on eight different days. Three of these tornadoes occurred on March 28, 1993, which was previously the most active March tornado outbreak. In addition, there had never been a tornado rated EF2 or higher before April 12.

Storm spotters and SKYWARN amateur radio operators kept the National Weather Service informed with ground reports of tornado locations. Above is a radar image at the height of the outbreak. Note the "hook echo" (in the blue circle) near Bird City, Kansas. Hook echoes normally are a good indicator of tornadic thunderstorms.