



**National  
Weather  
Service  
Topeka,  
Kansas**

**INSIDE THIS  
ISSUE:**

- How active was the severe weather season 2011?
- How NWS provides decision support services in and outside of Northeast Kansas
- A user friendly tool to access past weather data online
- NWS on Facebook and how it can keep you aware of the weather.

# The Topeka Tiller

**VOLUME 5, ISSUE 2**

**NOVEMBER 2011**

## The Sweltering Summer of 2011



**By Matt Anderson, Meteorologist Intern**

After a rather cold and snowy winter, many people wondered how the summer would compare. By the end of June the area was in a hot and dry pattern that would persist for much of the summer. The average temperature for the three month period of June, July, and August is 76.8 degrees Fahrenheit for the Topeka area. However, the three month period of June, July, and August in 2011 was the third hottest on record with an average temperature of 82.0 degrees Fahrenheit.

The beginning of the extended heat wave started at the end of June with a high temperature of 101 on June 30<sup>th</sup>. The heat persisted into July with a streak of 10 days above 100 degrees in Topeka from July 15<sup>th</sup> through the 24<sup>th</sup>. The average temperature during this period was 89.6 degrees. This 10 day streak ties

for the 7<sup>th</sup> longest streak of 100 degree days in a row. The longest streak occurred back in the summer of 1936 and 1901 with 19 consecutive days above 100 degrees. The summer of 2011 also produced 25 days with temperatures above 100 degrees with one day a hundred or above in June, eighteen days in July, four days in August, and two days a hundred or above in September. The 25 days above 100 degrees this summer ranks 8<sup>th</sup> all time for the Topeka area. The record for most 100 degree days in a year is 59 in 1936.

The Topeka area recorded its highest temperature of the period on August 2<sup>nd</sup> of 112 degrees at the Topeka Billard Airport. The temperature ties with the fourth highest temperature ever recorded in the Topeka area. The highest ever recorded was 114

degrees on July 24<sup>th</sup>, 1936 followed by 113 degrees on August 13<sup>th</sup> and 14<sup>th</sup> of 1936, and 112 degrees on August 10<sup>th</sup>, 1934, August 15<sup>th</sup>, 1936, and August 2<sup>nd</sup>, 2011. The last date with temperatures at or above 112 degrees occurred on August 15<sup>th</sup>, 1936. Therefore, temperatures of 112 or greater have not occurred in Topeka in over 75 years.

In addition to hot conditions across the area the pattern promoted drier than normal conditions across the area. Drought conditions slipped into extreme and exceptional drought across portions of south central Kansas and portions of southwestern Kansas. The average precipitation for the June, July,

**Sweltering page 3**

## What To Expect This Winter Season

**By Kyle Poage, Forecaster**

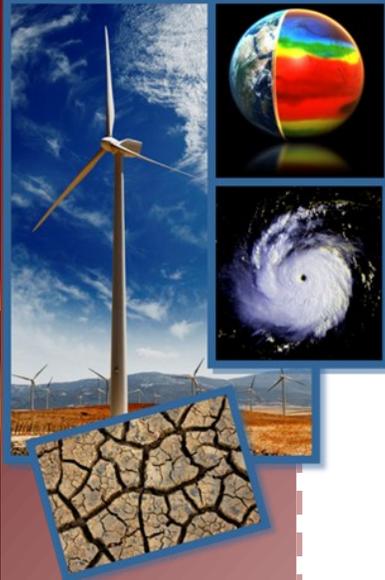
Although warm temperatures have been common in recent weeks, mercury levels dropped well below the freezing point in mid-October, reminding us that winter is not far away. For the majority of the area, the past two winters (consisting of the months of December through February) have been rather cold and snowy. Temperatures generally averaged to be two to five degrees below normal during the most recent winter, though even colder values of four to nearly ten degrees below normal were observed in

the winter of 2009-2010. For Topeka and Concordia, snowfall records date back into the 1880's, and when added together, the total accumulations for the past two winters rank as the highest for any consecutive winters for Topeka and third highest for any consecutive winters for Concordia. In terms of total precipitation, however, amounts for the area were typically below normal as much of the precipitation from these winters

fell as snow. The Winter Outlook, issued by NOAA's Climate Prediction Center in late -October, indicates equal chances for temperatures to average to be above normal, near normal, and below normal. There is a slightly greater than equal chance for the total amount of precipitation to be below normal for locations generally south of U.S. Highway 36, with equal chances for precipitation to be above normal, near normal, and below normal

**Winter Page 3**

## Reducing Extreme Weather Impacts: Building a Weather-Ready Nation



2011 has been a year of extreme weather events. The impact of these events, both on lives and the economy, is staggering. So far this year, more than 540 people have been killed by tornadoes, making this the fourth deadliest year on record. In April alone, there were 875 tornadoes that resulted in 361 fatalities. On May 22, a violent tornado tore through Joplin, Missouri. With more than 150 fatalities, it was the deadliest single tornado since modern record keeping began in 1950. It is not just tornadoes that are having an impact either. At the beginning of the year, a large winter storm impacting 100 million people in central, eastern and northeastern states resulted in \$1.6 billion of insured losses, and 36 lives lost. Here in Kansas we also suffered the impacts of extreme weather with 3 lives lost from storms including the May 21<sup>st</sup> Reading tornado. Meanwhile an extreme drought continues to plague southwest Kansas where crop losses were reported in the millions of dollars.

These extreme impacts are not anomalies. The

continued increase in the severity of impacts is attributable to social changes represented in demographic trends and growing infrastructure threats. For example, the U.S. population has almost doubled since 1954. This increase corresponds with higher property and infrastructure values. In addition, trends such as urban sprawl and conversion of rural land to suburban landscapes increase the likelihood a tornado will impact densely populated areas as we witnessed this year. However, much of the risk can be mitigated through weather awareness and increased preparedness and this is where your local NWS office can help to make a difference.

The Weather-Ready Nation plan paves the way for a new model of doing business that emphasizes the role of communities to better prepare the American public for extreme weather events. The idea behind Weather-Ready Nation is that your NWS is exploring new ways to serve community emergency

responders through increased community presence because accurate, early and trusted warnings are just the initial requirement for saving lives. Other components include a community-based public preparedness program led by NWS experts to help generate a more effective response to extreme weather threats.

In summary, as society grows so do the vulnerabilities to extreme weather. Your National Weather Service is ready to assist local emergency managers and our media partners to help reduce vulnerabilities to hazardous weather through improved forecasts and warnings and better preparedness. Together we can build a Weather-Ready Nation that is Prepared for and Responds to extreme weather events.

For more information on the National Weather Service Weather-Ready Initiative and strategic plan please visit <http://www.weather.gov/com/stratplan/>

**Article written by Chad Omitt,  
Warning Coordination  
Meteorologist**

## 2011 Flooding Along the Missouri River

By Jared Leighton, Forecaster

2011 marked an extraordinarily bad year with regards to flooding along the Missouri River through North Dakota, South Dakota, Nebraska, Iowa, Kansas, and Missouri. Abnormally wet conditions across those areas during the winter and spring months led to extreme flooding in cities located on the banks of the Missouri River. Between December 2010 and July 2011 areas in the Missouri River basin

received between 15 and 24 inches of precipitation, much of it coming in the form of snow during the winter months. As a result of the wet conditions many locations along the Missouri River received between 120% and 150% of normal precipitation during this time period. When the warm rains of spring arrived the water that fell during spring combined with the standing snow to overwhelm the Missouri River system. Perhaps the most

significant impact of the flooding was felt along Interstate 29, which was closed along portions of the highway between Nebraska City, Nebraska and Missouri Valley, through the summer months. Perhaps the hardest hit metropolitan area was Omaha, Nebraska where the Missouri River reached its highest point

**Flooding Page 5**

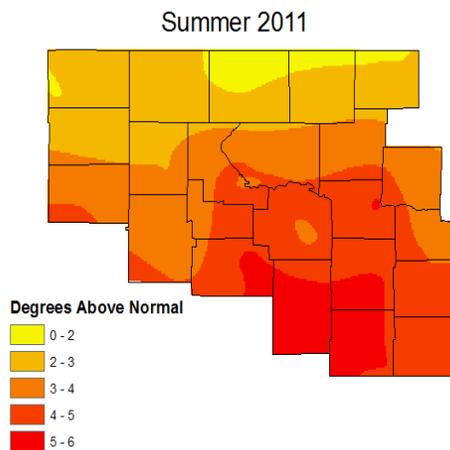


Aerial view of the Missouri River flood plain near Omaha (background). The river overwhelmed portions of Interstate 29 (foreground) for much of the spring and summer.

# Sweltering Summer *Continued from Page 1*

and August period is 12.87 inches for the Topeka area. However, during the months of June, July, and August of 2011 only 8.28 inches of rain fell. This amount is around 4.5 inches below normal for Topeka.

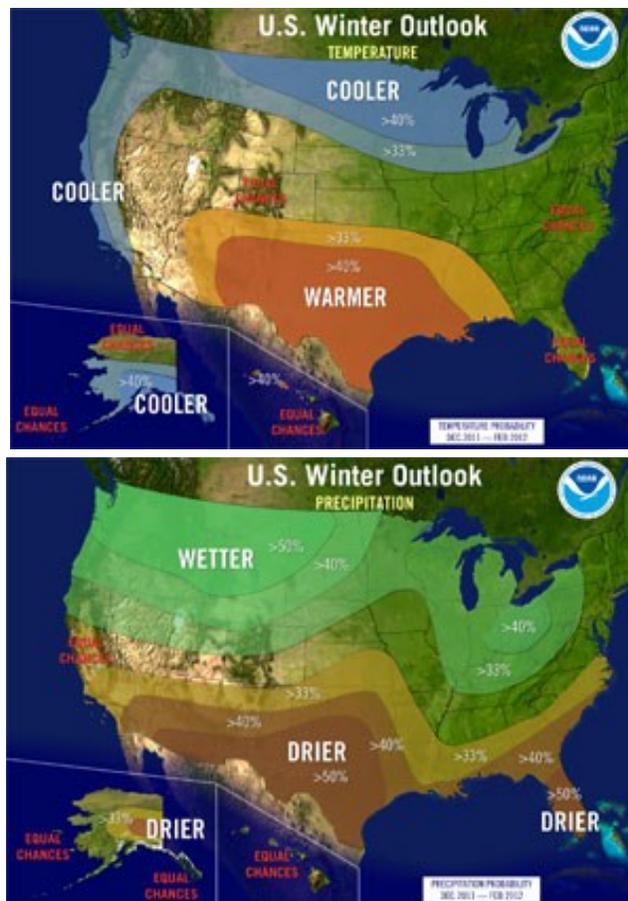
Overall, the United States experienced its second warmest summer on record according to NOAA's National Climate Data Center (NCDC) in Asheville, NC. It was the 3<sup>rd</sup> hottest summer on record in the Topeka area. The majority of the United States remained under a relentless heat wave caused by large upper level ridging that helped surge warm air into the United States for most of the summer.



Left Image: A temperature comparison across Northeast Kansas of the average degrees above normal temperature for the Summer 2011. Note the southern portions were as much as 5 to 6 Degrees F above normal for the season.

# Winter *Continued from Page 1*

along and north of this highway. See the included maps for areal depictions of these outlooks. Colder than normal ocean temperatures near the equator in the Pacific Ocean, termed La Niña, were present last winter, and after warming somewhat this spring they returned to below normal levels in the late summer and are expected to continue to cool into the winter months, meaning La Niña should be present again this winter. There is not a strong correlation for specific conditions to occur during La Niña for the local area, but studies conducted at the NWS Topeka office indicate, since 1949 when La Niña conditions have been monitored, three of the top five warmest and wettest winters have occurred in Topeka during moderate to strong La Niña episodes.



The Temperature and Precipitation outlooks over the United States for the Winter 2011 season.

# Tornado Preparedness

By Chad Omitt, Warning Coordination Meteorologist

So far this year, more than 540 people have been killed by tornadoes, making this the fourth deadliest year on record. In April alone, there were 875 tornadoes that resulted in 361 fatalities. On May 22, a violent tornado tore through Joplin, Missouri. With more than 150 fatalities, it was the deadliest single tornado since modern record keeping began in 1950. Kansans are all too familiar with the risks of tornadoes and this year was no different. On May 21<sup>st</sup> one person was killed by an EF3 tornado that hit Reading. With so many fatalities this year we cannot over emphasize the importance of preparedness especially if you live here in Kansas.

So what can you do to reduce your risk from a tornado? In short, have a plan and practice that plan.

Take these steps to protect yourself and your family as fully as possible:



- **Decide in advance where you will take shelter** (a local community shelter, perhaps, or your own underground storm cellar or in-residence "safe" room). When a tornado approaches, go there immediately. If your home has no storm cellar or in-residence "safe" room and you have no time to get to a community shelter, head to the centermost part of your basement or home -- away from windows and preferably under something sturdy like a workbench or staircase. The more walls between you and the outside, the better.

- **Become familiar with your community's severe weather warning system** and make certain every adult and teenager in your family knows what to do when a tornado "watch" or "warning" sounds. Learn about your workplace's disaster safety plans and similar measures at your children's schools or day care centers.

- **Study your community's disaster preparedness plans** and create a family plan in case you are able to move to a community shelter. Identify escape routes from your home and neighborhood and designate an emergency meeting place for your family to reunite if you become separated. Also establish a contact point to communicate with concerned relatives. Put together an emergency kit that includes a three-day supply of drinking water and food you don't have to refrigerate or cook; first aid supplies; a portable NOAA weather radio; a wrench

**Tornado Page 7**

## 2011 Severe Weather Review

By Jared Leighton, Forecaster

The 2011 severe weather year kicked off in early April when a series of supercells formed across northeast Kansas. One of these supercells created a long-lasting, damaging gustnado and affected portions of Shawnee and Jefferson Counties. Throughout the severe weather year a total of 12 tornadoes formed in northeast Kansas, 8 EF-0, three EF-1, and one EF-3 tornadoes. The worst of these tornadoes occurred on May 21<sup>st</sup>, and caused significant damage and one fatality in the city of Reading, KS. The following is a summary of the notable severe weather events that affected

northeast Kansas in 2011:

**April 3** - During the day, temperatures warmed to record highs across northeast Kansas before a powerful storm system moved through that afternoon and evening. A string of discreet supercells initiated late in the day behind a sharp cold front, and before long these storms were producing large hail and strong, damaging winds. Several locations across northeast Kansas reported hail up to 2 inches in diameter and winds of 70-80 mph, with a few reports of structural damage due to straight line winds. Aside from the

widespread hail and strong winds, the storms caused a few gustnados to form near the leading edge of the cold front. The most intense of these gustnados formed near the town of Williamstown, where an NWS survey crew identified areas of enhanced wind damage. Two center-pivot irrigators were flipped over and a large outdoor shed and several trees were destroyed.

**May 21** - In perhaps northeast Kansas' most significant severe weather event of 2011, at least seven tornadoes touched down across Lyon, Osage, Shawnee, Franklin, Douglas, and Jefferson

**Severe Weather  
Page 7**

*“Perhaps the hardest hit metropolitan area was Omaha, Nebraska where the Missouri River reached its highest point since 1952. “*

## Meet your Meteorologist, Jenifer Bowen

Hello! My name is Jenifer Bowen and I am currently a Meteorologist Intern at the National Weather Service Forecast Office in Topeka, KS. A Meteorologist Intern is defined as a certified Meteorologist who is in training to issue the official forecast as well as local warnings that are issued. My duties include: verifying warnings issued in our office by working with emergency managers, local media, and trained storm spotters; performing daily balloon launches to obtain a vertical profile of the atmosphere; performing quality control on routine and climate products; most importantly working alongside

trained and experienced Meteorologists to strengthen my skills needed to become a forecaster. After I receive my training, I hope to become a Journeyman Forecaster and eventually hold an administrative position in the NWS. Growing up in Tulsa, Oklahoma, I saw my fair share of severe weather. From snowstorms to tornadic storms, I was constantly surrounded and fascinated by what the atmosphere was doing. My parents would say that I have literally been interested in the weather since I was two years old. My

mother tells the story of how excited I would become during spring severe weather season. My face was always glued to either the window or the television screen- where a well-respected Meteorologist gave our family the latest warnings and reports. The earliest that I, personally, recall becoming interested in weather was at eight years old. Although it probably wasn't safe, my dad and I recorded on video the most significant

**Meteorologist  
Page 6**

## Missouri River Flooding *Continued from Page 2*

since 1952. At least seven cities along the Missouri River recorded record stages during the summer of 2011; an additional six locations recorded stages which ranked in the top 5 all-time highest stages, including Omaha, Nebraska; St. Joseph, Missouri; and Atchison, Kansas. With drier conditions finally prevailing across the Central and Northern plains

during the late summer and early autumn the Missouri River has since returned to normal stages.

**Flooding Page 6**

## National Weather Service Week of Service 2011

*By Scott Blair, Forecaster*

NWS Topeka staff and family members donated to and participated in the Leukemia and Lymphoma Society's Light the Night Walk in Topeka on October 1st, and the Head for the Cure's 5K run for the fight against brain cancer in Lawrence on October 2nd. Additionally, staff members contributed clothing and

other items for donation to the local Goodwill. These service efforts were part of the National Week of Service that took place throughout the National Weather Service offices and centers.

All NWS employees from offices across the country were encouraged to volunteer service with an

organization of their choice to show they care. The purpose of this week was to shed positive light on the lives of those we serve, and enhance servant leadership skills at work and home. Ultimately, the goal of this week was to facilitate frequent volunteer community service activities across the NWS in the future.



NWS Topeka staff and family members donated to and participated in the Leukemia and Lymphoma Society's Light the Night Walk in Topeka (Top Image) and the Head for the Cure's 5K run for the fight against brain cancer in Lawrence (bottom image).

## Meet your Meteorologist *Continued from Page 5*

number of cloud-to-ground lightning strikes that I had ever seen at one time. I can remember the pure awe I felt during that event, and I have kept the tape to this day. I believe that my dad, who encouraged my interest and took me on numerous storm chases, helped motivate me to pursue my dream of becoming a Meteorologist.

The May 3, 1999, tornado outbreak over Oklahoma further focused the direction my eventual career would take. At the time, I was 10 years old and can remember clearly the events that occurred that day. I knew there was a moderate risk of severe weather in Oklahoma and I kept my eyes to the weather throughout the day. In the afternoon I had soccer practice, but my coach dismissed us early when she received word of the F5 tornado that was striking Moore and Oklahoma City. I raced home to watch the tornadic storms unfold through the evening as they gradually moved northeast on Interstate 44 into the Tulsa area. As the storm that had a history of producing tornadoes approached, my dad and I drove to the top of a hill near

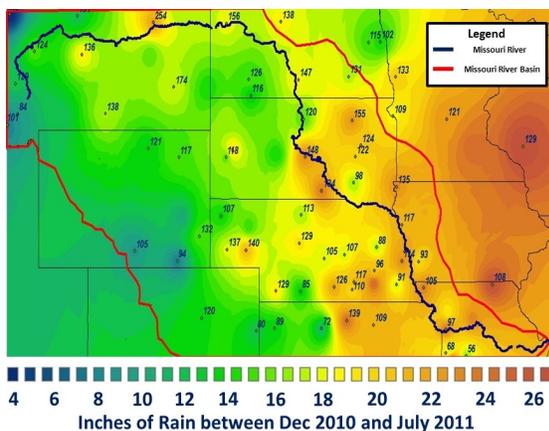
Sapulpa (at a safe distance) to watch the storm roll through. We saw multiple wall clouds and a funnel cloud that evening. I learned that day how dangerous the weather can be and it greatly increased my respect for it. I then wanted to learn as much as possible about the weather's behavior so that I could warn the public and help save lives.

I graduated Union High School in Tulsa in 2006, and attended Tulsa Community College for my freshman year. From there, I transferred to the University of Oklahoma in Norman and earned my Bachelor's Degree in Meteorology with a minor in Math. My hobbies include being an OU football fan, attending music concerts, and traveling. My connection with the NWS began as a volunteer in June 2008 at NWS Norman in June 2008. I was promoted to a Student Intern (SCEP) in August 2008. When I graduated in the spring of 2010, I was offered a position for the NWS in Topeka, KS as a Meteorologist Intern. I love my position here and I am truly grateful and privileged to be working with some of the best

people in the field of Meteorology and the NWS. They have taught me many of the skills that it takes to become a good scientist and forecaster, and I look forward to passing on their knowledge as I continue to pursue my dream.



## Missouri River Flooding *Continued from Page 5*



The above map depicts the amount of precipitation between Dec 2010 and July 2011. The numbers show the percentage of normal for that particular time period. The blue line is the Missouri River itself, while the red lines roughly outline the Missouri River basin.

## Severe Weather *Continued from Page 4*

Counties; the strongest of these was an EF3 tornado that destroyed parts of Reading, Kansas. A single story home in Reading was swept off its foundation, and



An intense gustnado formed near Williamstown, KS causing some significant damage to outbuildings and agricultural equipment. Photo courtesy Scott Blair

several other two story homes suffered significant damage or complete loss of the second story. Later in the night, another tornado developed near Quenemo, and touched down on the west side of town destroying a couple structures. Aside from the numerous tornadoes, these supercells

also produced giant hail in Topeka, Kansas. Across the city baseball-sized hail did damage to property and vehicles. The largest reported hailstone was a 5.25 inch stone, which fell in southwest Topeka.

**June 1** - On the afternoon of June 1, another round of severe thunderstorms formed across northeast Kansas. Many of these storms produced severe hail up to the size of golf balls, but the strongest storms produced hail up to the size of baseballs. One of the strongest storms formed over Marion County and moved northward into Dickinson County. This storm produced a large amount of baseball-sized hail and even some softball-sized stones in Abilene, Kansas. Some of the storms had strong rotation, and one even produced a funnel cloud near Agenda. Aside from the significant hail and brief funnels, these storms were slow moving and brought torrential rain, flooding many communities. The storms dropped between 6 and 9 inches of rain over a 6 hour period in Clay, Riley,

Pottawatomie, and Dickinson Counties. In Manhattan the Red Bud Estates was completely inundated with running water from Wildcat Creek. Rock Creek in Louisville rose out of its banks and flooded some residences along Highway 99. Substantial flooding also occurred in the town of Morganville in Clay County and Ogden in Riley County.

**June 20** - Supercell storms developed in central Kansas during the late afternoon and early evening hours of June 20. Hail up to the size of 2 inches in diameter was reported with these storms across portions of Ottawa and Cloud Counties. As the storms moved eastward they gradually weakened and formed into a squall line, producing strong, damaging winds with numerous reports of minor damage across Riley, Morris, Marshall, Washington, and Lyon Counties.

August 19 - The late evening hours of Friday, August 19th brought a swath of significant damage to parts of Kansas,

**Severe Weather  
Page 11**

## Tornado *Continued from Page 4*

and other basic tools; a flashlight; work gloves; emergency cooking equipment; portable lanterns; fresh batteries for each piece of equipment; clothing; blankets; baby items; prescription medications; extra car and house keys; extra eyeglasses; credit cards and cash; important documents, including insurance policies.

- **Don't open your windows.** You won't save the house, as once thought, and you actually make things worse by giving wind a chance to get inside and cause more damage.

- **Don't try to ride out a tornado in a manufactured home.** Even manufactured homes with tie-downs overturn in these storms because they have light frames and offer winds a large surface area to push against. In addition, their exteriors are vulnerable to high winds and wind-borne debris.

**Do Not Take Shelter underneath an overpass!**

In summary, have a plan and have multiple ways to receive weather warnings. Practice your plan at least once each year and remain vigilant whenever a watch is issued. Be prepared for the sake of you and your family.

Please visit [Tornado Safety Tips](#) for more information on tornado safety resources.

Contact [chad.omitt@noaa.gov](mailto:chad.omitt@noaa.gov) if you have any questions about putting a plan together for your home or business.



# How to Access Past Weather Data

**Did you know...**

**That temperature and precipitation data are available for more than 100 sites in northeastern Kansas, the longest since 1859?**

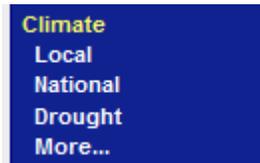
**That weather data reports are generated on a daily, monthly, and annual basis?  
That detailed information regarding past severe and significant weather events is readily available?**

**Well it's all true!** The National Weather Service, in conjunction with the National Climate Data Center and Regional Climate Centers, grants access to a wealth of past weather information via the National Weather

Service website. This information included weather records, normal conditions, daily temperature and precipitation information, and even detailed information on significant weather events. First you must access the National Weather Service Topeka's home page at the following link:

[www.weather.gov/topeka](http://www.weather.gov/topeka).

**Step 1**



Next, click on the Local link which can be found on the left hand column on the [www.weather.gov/topeka](http://www.weather.gov/topeka) webpage.

**Step 2**

**Past Weather  
Page 11**

## NWS Decision Support for Flooding Along the Mississippi and Ohio Rivers

By John Woynick, Senior Forecaster/Hydrology Program Leader

The National Weather Service provides decision support for public safety and ongoing disasters and recovery. Local, state and federal Emergency Management agencies are the primary agencies we have supported. I had an opportunity to provide decision support to the Illinois Department of

Emergency Management in late April and early May in support of operations concerning record flooding near and along the Ohio and Mississippi Rivers. During late April a nearly stationary front laid across the Ohio Valley and provided a focus for numerous thunderstorms which produced very heavy rainfall and flooding. The

flooding was exacerbated in southern Illinois by the fact that the Mississippi River was already flooding due to spring snowmelt in the northern plains and southern Canada, so the Ohio River could not empty into the Mississippi due to backwater effects. The National Weather Service in Paducah Kentucky serves the southern Illinois area

**Decision Support  
Page 10**

# Cooperative Observers' Corner

By Michael Couch, Observing Program Leader



Left Image: Rick Sellers and Pamela Konen proudly accept a Honored Institution Award, which was presented to the US Army Corps of Engineers facility at Council Grove Lake. This award recognizes the 50 years of service that the staff at the Council Grove project have provided to the National Weather Service Cooperative Observer Program.

Right Image: Wayne P. Griffin of Louisville, KS, along with his long-time canine friend, Ranger, proudly accepts a 15 Year Length of Service Award. Since 1996, Wayne has been providing timely and accurate river stage readings of Rock Creek at Louisville.



## Cooperative Observers' Awards Given

<u>Name of Observer</u>	<u>Location</u>	<u>Length of Service Award</u>
Frank Nelson	White City, KS	30 Years
Bill Whearty	Parallel, KS	25 Years
Joleen Day	Bushong, KS	15 Years
Robert Peterson	Louisville 5 NE, KS	10 Years

**Thank you Cooperative Observers for your continued dedicated hard work and support!**

## Decision Support *Continued from Page 8*

and requested additional personnel to fulfill the request for onsite support from Illinois Department of Emergency Management, so the NWS Topeka responded. My role was to serve as the onsite expert for weather and hydrology. I was responsible for providing weather and hydrology briefings in the morning with the first one involving the entire operations staff including the Illinois National Guard. The second briefing was to all affected county emergency managers. In the evening our briefings were televised back to the State Emergency Operations Center in Springfield Illinois. I provided advice as requested by the Operations Chief as well as the Incident Commander who was in charge of the entire incident. The flooding was record breaking along both the Ohio River and Mississippi Rivers. Many communities were flooded or had levee breaches or boils behind them due to the prolonged high water levels.



Cairo, Illinois which was surrounded by flood waters is located upstream of the Birds Point floodway. The image above depicts a floodway that was opened by the Corps of Engineers to save the city of Cairo from having its floodwalls overtopped by floodwaters.



Above is a picture I took of the Birds Point floodway about 12 hours after it was opened.

In addition to general briefings, I provided information when

requested by the general staff as well as real time weather support when storms moved into the operations area. Many National Guard members patrolled the levees 24hrs a day and lightning was a major concern. I worked in conjunction with the NWS Paducah staff as well as the River Forecast Centers that serviced the area to provide this support. I was also involved in consultations with FEMA and the Corps of Engineers. After being there only a few hours I found myself in strategy meetings helping them to decide where to place their assets along the Ohio River. Another round of heavy rainfall fell while I was there and produced catastrophic flooding in southern Illinois and Kentucky. Everyone worked together to help the people of southern Illinois during this trying time. It was fulfilling to be able to be a part of a team dedicated to helping others affected by the floods.

## **Winter Weather Awareness Day - November 16th**

Are you prepared at your home and in your vehicle for when the next big winter storm strikes northeast Kansas? On November 16th, the National Weather Service will honor Winter Weather Awareness Day. The goal is to inform and educate the area on ways to protect and prepare against the treacherous snow and ice that affect Kansas each winter season. NOAA researchers state that 70 percent of the fatalities related to ice and snow occur in automobiles, and about 25 percent of all winter related fatalities are people that are caught off guard, out in the storm. The following lists items you and your family can set aside in the event of a winter storm:

- Flashlight and extra batteries
- Battery powered NOAA Weather Radio
- Extra food and water
- Extra medicine and baby items
- First-aid supplies
- Emergency heat source
- Fire extinguisher/smoke alarm
- Food and water for Pets
- Also , carry a survival kit in your car in case you are stranded.

For more information on safety along with winter weather definitions and tips, visit the following website:  
[http://www.nws.noaa.gov/om/winter/resources/Winter\\_Storms2008.pdf](http://www.nws.noaa.gov/om/winter/resources/Winter_Storms2008.pdf)

## Past Weather Data *Continued from Page 8*

Follow the instructions in the table by 1.) Selecting a product from the list, 2.) Choosing one of the available locations for that product, 3.) Picking the desired time frame for that product, and 4.) Clicking "Go" to obtain the data.

### For More Detailed and Localized Data, Records, and Rates of Occurrence

By clicking on the NOWData tab from Step 2 (above) additional data can be obtained from a number of locations across northeast Kansas. Follow the instructions in the tables by 1.) Selecting a Product from the list, 2.)

Choosing one of the available locations for that product, 3.) Picking the desired time frame for that product, and any additional instructions presented. 4.) Clicking "Go" to obtain the data.

## Severe Weather *Continued from Page 7*

particularly Jackson, Atchison, Jefferson, and Leavenworth counties. This storm originated in southeast Nebraska, where it produced isolated hail up to the size of quarters, and then weakened slightly as it crossed parts of Nemaha and Brown Counties in Kansas where very heavy rainfall and isolated pea size hail occurred. However, the storm rapidly intensified as it moved into far southern Brown and northern Jackson counties. At this time, very large hail of 4.5 inches in diameter (larger than a softball!) developed and fell over the next hour or so.

Incredible wind speeds of 90 to 100 mph were reported from this storm as it tracked from Jackson County southeastward until it weakened slightly in the Kansas City metro area. While the storm was relatively isolated, those in the path of the storm sustained significant property and crop damage, with some fields being completely shredded to a total loss, and windows and siding broken to pieces.



On May 21, a significant tornado formed northeast of Emporia (top), and moved through Reading, KS causing major damage to the town (lower).



This outbuilding near Whiting, KS was destroyed by the August 19m wind storm. Photo courtesy of Luca Cochren



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**Editor: Jenifer Bowen,  
Meteorologist Intern**

**“Working together to  
save lives”**

## **Winter Weather Spotting Tips**

### **Weather to Report:**

**Snowfall depth  $\geq$  1 inch**

**Any ice accumulation (including roads)**

**Precipitation type changes (i.e. rain to freezing rain,  
snow to sleet, etc.)**

### **What to Include in your Report:**

**Your Name and/or Call Sign (Spotter Number)**

**Your Location**

**Time and Date of Event**

**Location of Event**

**Visit the following website for more information:**

**[http://www.erh.noaa.gov/iln/spotterpage/snowweb/  
measuringsnowfall.htm](http://www.erh.noaa.gov/iln/spotterpage/snowweb/measuringsnowfall.htm)**

## **NWS Topeka is on Facebook**

**By Brian Barjenbruch, Forecaster**

The National Weather Service in Topeka has officially joined Facebook! As of this past summer, every National Weather Service (NWS) office across the country along with national centers such as the Storm Prediction Center and Hydrometeorological Prediction Center, have individual Facebook pages. These pages serve as yet another resource for sharing weather information both from the NWS to the public and vice versa. So what does NWS Topeka do with this Facebook page? On any given day, NWS Topeka may post a graphical forecast concerning the next 24 hours. You may find information on record breaking weather events, photos of thunderstorm damage or impressive clouds, recorded storm safety presentations, a schedule of upcoming spotter training events, or even some insight into what employees of the National Weather Service do to support the local community.

The NWS Topeka Facebook page is a unique service in that it allows for information to transfer from the NWS to our followers, or from page followers back to the NWS. For instance, an individual can take a picture of a large hailstone or a downed tree at their home and post it to the NWS

Topeka Facebook page in a matter of seconds. This provides the NWS with valuable storm scale information in near real time. If you would like to follow the NWS Topeka Facebook page, simply log in to Facebook and type “US National Weather Service Topeka Kansas” into the search bar at the top of the page. When you get to the local office page, click on the “Like” button next to the page name. Future page updates will be displayed News Feed and you will have full access to communicate with the NWS Topeka via this site. We also welcome any posts of severe or winter weather pictures around Northeast Kansas.

