



National
Weather
Service
Topeka,
Kansas

The Topeka Tiller

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Winter Has Arrived: Are You Prepared?

By Chad Omitt, Warning Coordination Meteorologist

Living in Kansas you may think that tornadoes pose the greatest risk to your safety from Kansas weather. However, the greatest risk to your safety actually comes from driving in snow and ice during the winter season. We're not talking about the traditional blanket of snow that you can see. The true road ice hazard is subtle and intermittent icing due to light winter precipitation, events that suffer from a lack of obvious visual cues and public awareness (see image below). It is these conditions that cause the biggest percentage of deaths and injuries and it doesn't take much to make roads icy enough for you to lose control!



Although numbers are largely underreported, here in Kansas at least 15 to 20 people lose their lives in automobile accidents where ice and snow played a role and that number may be much higher. By comparison, tornadoes kill around 2 people each year in

Kansas and injure far fewer.

So what can you do to lower your risk when driving on ice and snow?

1. Know what to expect on your trip and plan accordingly. If you know you need to travel through especially bad wintry conditions, be sure to check the weather forecast along your trip by visiting www.weather.gov. Visit www.kansas.gov to access information about your road conditions including webcams.

2. Slow down and relax. This is the most important rule to driving in bad conditions of any kind. And we're not just talking about speed — you want to do everything more slowly and more lightly than you normally would. Hitting your gas pedal, slamming your breaks or cranking your wheel too quickly is a surefire way to lose traction on an icy or wet road

3. If you start sliding, turn slightly into the skid and pump your breaks.

Note: If you have anti-lock (ABS) breaks, do not pump

the breaks. Once you're already sliding, your tires have lost traction with the road. It seems counterintuitive, but in order to avoid a spinout you need to turn slightly into the skid, slowly let of the gas and if you have standard brakes, start pumping them lightly. *For ABS breaks, apply steady pressure to the breaks.* Yanking the wheel in the other direction and locking the brakes will stop your tires from turning, but you'll lose all hope of regaining traction with the road surface.

4. Know when to quit. Sometimes road conditions are simply too dangerous to drive in. If you can't see or you keep losing control, pull over. Never push your luck if you're unsure. It's not worth it to drive if you're jeopardizing yourself, your passengers, or other drivers on the road.

5. In the event you get stuck in the snow. A common mishap to occur when driving through snow covered roads especially in neighborhoods and rural areas. The first step is to not panic and recall the following tasks. First, do not

What We Learned From The 2013 Oklahoma Tornadoes

By Chad Omitt, Warning Coordination Meteorologist

This past May, Oklahoma City endured 3 violent tornadoes within a 2 week period. May 19th, 20th, and 31st were days when at least one violent tornado (winds in excess of 164mph or an EF4 on a scale of 0-5) occurred. During the final [event on May 31st](#) thousands of people took to the roadways to evacuate in an attempt to avoid the storms that were producing the tornadoes. Unfortunately this resulted in traffic jams

and placed those people in one of the most dangerous places to be in a tornado-a car! (Figure 1). We will not review the time lines or specific events of these tornadoes, but instead we wanted to take this opportunity to reiterate the guiding principles of tornado safety that have been preached for decades and remain the most important advice for you to remember.

Your Best Options for Tornado Safety are (in this order)

Get as low as possible and put as many walls as you can between you and the tornado.

1. In an underground storm shelter, storm cellar, basement or engineered safe room designed to withstand a tornado

Tornado continues Page 5

Figure 1. Traffic stopped on I-35 May 31st (Oklahoma City, OK)

2013 NWS Week of Service At Topeka

By Audra Hennecke, Forecaster

Service. It's in our title, but its meaning extends far beyond our weather forecasts. In addition to diligently issuing weather forecasts and life-saving warnings, it's important for us to extend this idea of 'service' beyond our day-to-day job descriptions and into the communities in which we work. This year the National Weather Service held its 3rd annual Week of Service during the week of September 29-October 5. The number of NWS offices that participate in the service opportunity continues to grow every year, and

this year saw the highest participation rate to date! This year's Week of Service saw participation from 71 NWS forecast offices, 7 River Forecast Centers, 4 Aviation Weather Units, 5 Regional Headquarters, 3 National Support Centers, and 2 NWS partners. From these offices, a total of 1,210 NWS employees and 81 NWS employee family members helped 118 different organizations during the Week of Service. Together, the participating

Service continues Page 6

Remembering The March 1984 Ice Storm

By Matt Wolters, Lead Forecaster

Just when Kansans were starting to think about spring and all the activities that come along with the change of seasons, a major winter storm struck the state on March 18, 1984 and lasted for three days. The storm brought a blizzard to northwestern Kansas while a severe ice storm impacted central parts of the state through northeast Kansas.

more than a foot with winds between 30 and 40 mph closed nearly all the roads in northwest Kansas stranding thousands of travelers. Meanwhile in central and eastern Kansas, ice accumulations were over an inch on power lines, trees and all exposed surfaces crippling much of northeast Kansas.

some without power for a week. Several communication towers in Wichita and Topeka could not hold up to the strain of the ice and buckled or completely failed under the weight of 3 inches of ice. To add to the mess, the winter storm dropped another band of snow over central Kansas before all was said and done.

The ice storm caused widespread damage leaving

Ice Storm continues Page 6

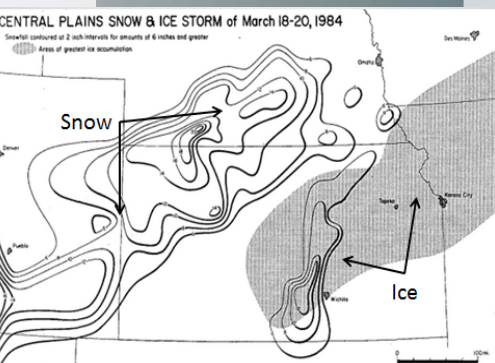


Figure 1. Contours show where the heaviest snowfall occurred and the shaded areas are where accumulations of ice were the greatest

Winter Continued...

spin the wheels by pushing on the gas. This will only dig the vehicle deeper into the snowpack. Next, turn your wheels from side to side to push any snow that might be in the way. Try to press the gas pedal lightly to ease yourself out. If this does not work, it's time to get out of the car. Use a shovel to clear the snow away from the wheels and underside of the car. Next, pour non-clumping cat litter or sand in the path of the wheels to help gain traction.

Even the smartest and safest drivers get into accidents. That's why it's crucial to be prepared for the possibility of any kind of collision or accident that could leave you and your passengers stranded on the side of a cold and possibly dangerous road. The first step is to build an emergency kit and place it in the trunk of your car.

Inside, you will want to include common car safety items like jumper cables, a flashlight and a roadside visibility kit of either reflectors or flares. If you are stranded, a small shovel and bag of sand are must-haves. Here's a full list of supplies you may want to include in your kit:

- Tools: jack, lug wrench, shovel

- Non-clumping kitty litter, sand or de-icer
- Flares, reflectors and flags
- Extra warm clothes, boots, hat and gloves
- Ice scraper and snow brush
- Cell phone and car adapter
- Rechargeable flashlight
- First aid kit
- Matches or lighter
- Battery jumper cables
- Extra food and water
- Blanket/sleeping bags
- Pocket knife

Points to remember:

- Take it slow! Even vehicles with four wheel or two wheel drive are susceptible to trouble on icy roads. Slowing down to below 45mph when icy roads are a threat is one of the best ways to avoid an

accident. Leave yourself plenty of room to stop (at least three times more space than usual between you and the car in front of you).

- Wear your seat belt! Even though wearing your seat belt should already be a no-brainer at all times, during the winter it's even more critical. An alarming number of road ice fatalities occur with minor accidents where the vehicle occupants were not wearing seat belts.
- Turn on your lights and keep windshields clean to increase visibility for you and to other motorists. Also, do not use cruise control or overdrive as it can reduce the traction you have on icy roads.
- Pay Attention! Put your mobile device away and focus on the road with both hands on the steering wheel!

By remembering these few important points we hope you can help keep you, your family and fellow drivers safe this winter season.



Young Women Explore Science

By Audra Hennecke, General Forecaster

On October 8th, four National Weather Service meteorologists assisted with the 7th annual Women in Science (WIS) Day hosted at Washburn University in Topeka, Kansas. The National Weather Service served as one of more than a dozen sponsors for the event. This year approximately 250 7th-grade girls from 10 area schools attended the WIS Day, which is designed to demonstrate the variety of different science professions and to learn about the wide range of career possibilities that exist in the sciences. Studies indicate that girls perform as

well as boys in math and science throughout elementary school, but begin to lose interest in these types of courses as they enter into junior high and high school. In an effort to turn these stats around, the WIS Day brings in several local, professional female scientists to talk about their careers, their field of work, and to conduct hands-on laboratory activities with the girls so that they can learn more about these diverse science careers. During the WIS Day, there were 3 guest speakers and a total of 15 different interactive labs. The girls could choose 2 labs in which to participate. The labs covered a wide range of

interesting scientific topics, such as forensic science, physical therapy, food chemistry, biology, sports medicine, and earth science. Some examples of the exciting labs the girls could participate in included demonstrations on ultimate crime solving tools from a forensic scientist, learning how chemistry plays a role in the kitchen while getting to make ice cream, and exploring more about the healthcare field of athletic training by simulating how to treat common athletic wounds. In addition to participating in

**Women
continues Page 4**

Meet Your Local Meteorologist!

By Kris Craven, Lead Forecaster

My name is Kris Craven, and I am one of the Senior Meteorologists here at NWS Topeka. I am a bit of an oddity because most folks in the NWS move around frequently and end up living far away from where they grew up. I have been in several stations around the U.S. in my career, but I was actually born in Lawrence, Kansas

and was fortunate to be accepted for a position here in Topeka back in 2005. I live in Lawrence with my family and near my friends, some of whom I have known for more than a few decades!

My wandering days began when I moved to Wisconsin to work on my Master's

Degree in Meteorology. While in school, I job shadowed at the National Weather Service (NWS) office in Sullivan, WI and got a glimpse of what operational meteorology was like. My first full time job in the NWS was in sunny southern Florida, followed by a promotion a few years later

*Meet
continues Page
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Women Continued...

these lab sessions, the girls had the opportunity to speak with the women scientists and engineers who volunteered to assist with the WIS Day. Questions were discussed such as: how they became interested in their field of study, career responsibilities, and the wide selection of other science professions that are available in the real world.

Meteorologists from the National Weather Service hosted one of the 15 labs, in which three mini-weather experiments were conducted. The first experiment allowed the girls to create convective currents using a container of water, ice cubes, and food coloring to learn more about how thunderstorms develop. In the second experiment, the girls were able to make

lightning by utilizing Styrofoam plates, aluminum pie pans, and wool fabric to create static electricity. Through this experiment the girls were able to learn how lightning actually forms in the atmosphere during a thunderstorm. The final experiment allowed the girls to learn about the formation of clouds by making fog in a jar, utilizing a jar of warm water, a bag of ice, and a match. The girls were very energetic and had a great time participating in each of the experiments. This WIS Day ultimately was just as exciting for the NWS meteorologists as it provided a wonderful opportunity to talk with middle-school girls about their interests in science and the types of careers they see themselves pursuing as they continue on to college and head into the real world!

Figures 1 and 2. Middle school girls from around the Topeka area performing science-related lab experiments



Meet Continued...

to the NWS office in Pueblo, Colorado. Four more years and another baby later, I was chosen for a Senior Forecaster position here at the Topeka office.

I was terrified of thunderstorms and tornadoes as a child, but this also made me quite fascinated with the weather. At some point I finally realized that if I was going to watch the weather all the time, I should probably do this for a career! And while my fears are much less now after a long education and work history, I still hold a deep respect for the power of the weather. I love presenting safety talks on severe weather safety for kids and adults alike. I also head up the fire weather program here at the office and have the benefit of conducting outreach activities involved with educating people about how the weather impacts fire behavior. I very much enjoy working on the operational side of meteorology - every day is different! There are a lot of career opportunities to pursue, but for now I enjoy the life I have made here in northeast Kansas.

Tornado Continued...

2. On the lowest floor of a sturdy building:

- Stay away from doors, windows and outside walls.
- Put as many walls between you and the tornado as you can-an interior room.
- Use pillows, couch cushions, sleeping bags, a mattress or blankets to cover up.
- If you or your children have helmets, wear them!
- If you have an infant, put them in their car seat or carrier.

If you live in a mobile home-evacuate and go to the nearest shelter

Other important sheltering reminders:

- Wear long pants, long sleeve shirt and shoes (not sandals, crocs, etc.)
- Charge your cell phone and take it with you to shelter

You can survive almost every tornado if you follow these guidelines!

Tornadoes and Cars-Final Thoughts

During a tornado, aside from a mobile home, a vehicle is one of the most dangerous places to be especially with a storm in a crowded metropolitan area.



The vast majority of tornadoes are very survivable if you abide by some very simple guidelines. Get to the lowest level of a sturdy structure and get as many walls between you and outside as possible.

Service Continued...

offices collected nearly 5 ½ tons (11,154 lbs.) of food from 36 food drives, 464 lbs. of pet food from 11 pet food supply drives, and 10 schools received supplies from 3 school-supply drives. 21 offices volunteered at their local food banks, in which they collectively sorted over 13 tons (26,174 lbs.) of food and prepared 21,077 meals. Another 16 offices helped to clean up their environment by collecting nearly a ton of trash from along roadsides, rivers, and lakes. All of these efforts were accomplished outside of the normal work hours and on employees' own time.

The NWS Topeka office participated in this year's NWS Week of Service by volunteering at the Harvesters Food Bank in Topeka, KS. Harvesters is a clearinghouse for the collection and distribution of food and related

household products for the local area. A total of 6 employees and employee family members volunteered at the facility by packaging up fresh produce in preparation for its delivery to several local food pantries. During our time at Harvesters, we managed to bag up more than 1,200 lbs. of carrots (Top Figure)! We truly enjoyed our time at the Harvesters Volunteer Outreach Center for the NWS Week of Service, and, as an office, we look forward to finding other opportunities in the future in which we can help serve the community in which we work!

Bottom Figure:
Forecasters Kyle Poage and Brian Barjenbruch sort through carrots to deliver to families in the Topeka area.



Ice Storm Continued...

A foot of snow was measured on top of the ice just west of Wichita.

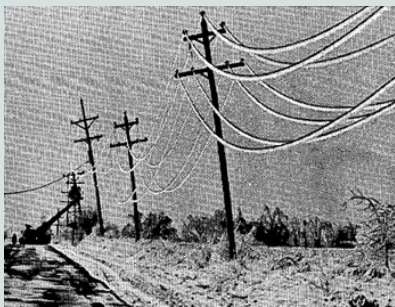


Figure 2 Power lines droop along old US Highway 69 north of Louisburg, KS -Photo by Phil McLaughlin, Miami Republican

During the height of the ice storm, Topeka received 1.53 inches of rainfall with temperatures between 33 and 29

degrees. This was the perfect setup for major accumulations of ice since it wasn't cold enough for precipitation to fall in a frozen form like sleet or snow. However the cold rain falling into the freezing air near the ground allowed it to freeze on contact causing widespread ice accumulations of more than an inch.

The March 1984 ice storm over central and northeast Kansas is considered to be one of the most damaging and widespread ever to occur in the state. The KSNT TV studios had to be evacuated for a time because the broadcast tower was leaning from all of the ice. Estimates carried the total cost of damages from the ice storm to be as high as \$50 Million. Here's hoping we make it through this winter without a storm like the one that struck in March of 1984.



Figure 3 Twisted skeleton of the 1439 foot tower of KLDH-TV in Topeka, KS. The tower buckled and collapsed under the weight of a 3 inch thick coating of ice. -Photo by Kathy Borchers, Topeka Capital-Journal

Cooperative Observer Corner

By Shawn Byrne , Observation Program Leader



Top Award Winner!!

Melba Bruce was the recipient of the Thomas Jefferson Award, the highest honor given to volunteers in the National Weather Service's Cooperative Program. The award was presented by Governor Sam Brownback in a presentation ceremony held at the Ottawa County Health Center in Minneapolis, KS. We thank Melba for her 29 dedicated years as a volunteer CO-OP observer. Only five recipients receive this prestigious award annually across the nation. It has been ten years since the last Jefferson Award was presented in Kansas. Congratulations Melba!!



40 Years of Dedicated Service!

Alan Winkler was recognized for 40 years of dedicated service to the nation's Cooperative Weather Observer Program. Alan has been collecting and reporting precipitation and snow measurements from his in McFarland, KS since 1973. The award was presented by Shawn Byrne, Observing Program Leader for NWS Topeka, and Bill Newman (retired, pictured) former Data Acquisition Program Manager for NWS Topeka. We thank Alan for his many years of service!!

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

Coop Corner *Continued...*



MANY THANKS!!

Many thanks to Robert Ziegenhirt for his 35 years of dedicated service to the NWS CO-OP program! Robert has been taking precipitation and snow reports from his home in Alta Vista, KS since 1978. We thank Robert for his many years of service! The award was presented by Shawn Byrne, Observing Program Leader for NWS Topeka, and Bill Newman (retired, pictured) former Data Acquisition Program Manager for NWS Topeka.



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**“Working together to save
lives: 24/7, 365 days a
year!”**

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 and Duration of Event

Visit the following website for more information:

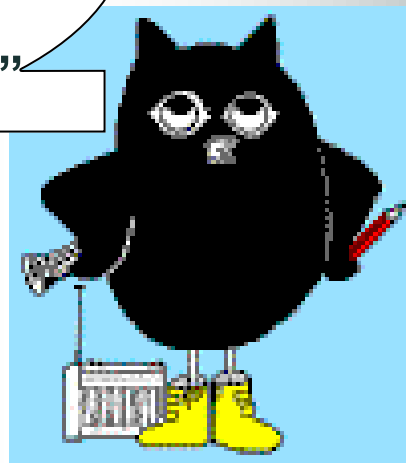
<http://www.erh.noaa.gov/iln/spotters/measuringsnow.php>

Owlie Skywarn says:

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support, and past weather
information:**

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out for safe keeping!**



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