National Weather Service

Severe Weather Awareness Week

April 7th - 11th, 2008

With springtime upon the region, it is never too early to start preparing for the severe weather season. **Monday, April 7th, through Friday, April 11th**, has been chosen as Severe Weather Awareness Week for the state of Nebraska. As long as no severe weather is occurring or expected, the statewide tornado drill will be conducted by the National Weather Service on the following date:

Wednesday, April 9th, between 10 & 11 A.M. CDT (11 A.M. & 12 P.M. MDT)

The purpose of the drill is to ensure that Nebraskans can adequately receive a tornado watch or warning and to practice any actions which would be taken to protect your life in the event of a real tornado. The test warning will be sent through all communication channels which are normally used for severe weather dissemination. This tornado drill presents an excellent opportunity for everyone at work, school, or home to practice their safety measures, and we hope all will participate.

Severe Weather Awareness Week provides the National Weather Service with the opportunity to test communication systems and get potentially life saving safety information out to the public. Each day during the week, the National Weather Service will concentrate on one safety topic and have this information available on our web page as well as on NOAA Weather Radio All-Hazards.

We hope that you will find the enclosed information useful, and please stress to others the importance of tuning in to NOAA Weather Radio All-Hazards, a local radio or television station, or the National Weather Service website, **http://www.weather.gov/**, when severe weather strikes. Emergency sirens are designed for outdoor notification and people may not receive the warning due to indoor noise or equipment malfunctions.

If you have any questions, or would like to know more about the weather in your area, please do not hesitate to contact us. The information for each office serving Nebraska is listed below.

West and North Central	South Central	East
National Weather Service 5250 E. Lee Bird Drive North Platte, Nebraska 69101 (308) 532-4936 **http://www.weather.gov/lbf**	National Weather Service 6365 North Osborne Drive West Hastings, Nebraska 68901 (402) 462-4287 **http://www.weather.gov/gid**	National Weather Service 6707 North 288th Street Valley, Nebraska 68064 (402) 359-5166 **http://www.weather.gov/oax**
Far West	**Southwest**	**Far Northeast**
National Weather Service 1301 Airport Parkway Cheyenne, Wyoming 82001 (307) 772-2468 **http://www.weather.gov/cys**	National Weather Service 920 Armory Road Goodland, Kansas 67735 (785) 899-7119 **http://www.weather.gov/gld**	National Weather Service 25 Weather Lane Sioux Falls, South Dakota 57104 (605) 330-4247 **http://www.weather.gov/fsd**

National Weather Service

Severe Weather Terminology

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SEVERE THUNDERSTORM — A thunderstorm is considered severe when it produces any of the following: Hail 1" (quarter size) or larger in diameter, winds which equal or exceed 58 MPH, or a tornado.

FUNNEL CLOUD — A funnel shaped cloud, usually extending from a convective cloud, which is associated with a violently rotating column of air that is NOT in contact with the ground.

TORNADO — A violently rotating column of air that extends from a convective cloud and is in contact with the ground. The entire column of air associated with a tornado is not always visible. A tornado may only be visible once it has picked up enough dirt and debris.

HAZARDOUS WEATHER OUTLOOK—A product which is issued daily, highlighting any potential significant weather in the area for the next 7 days.

WATCH — Issued when conditions are favorable for the development of severe weather in and close to the watch area. The size of the watch can vary depending on the weather situation and is usually issued for a duration of 4 to 8 hours. During the watch, people should review severe weather safety rules and be prepared to move to a place of safety if threatening weather approaches.

WARNING — Issued when severe weather is detected by radar or reported by storm spotters. Information in this warning will include the location of the storm, what areas will be affected, and the primary threat associated with the storm. People in the affected area should seek safe shelter immediately. Remember that severe thunderstorms can produce tornadoes with little or no advance warning. Warnings can be issued without a watch already in effect.

SIGNIFICANT WEATHER ALERT — Issued for "near" severe thunderstorms. Typically issued for storms with 3/4" (penny sized) hail and wind gusts near 50 MPH, but can also be issued for large amounts of small hail covering the ground. It is used as a "heads up" for ongoing severe storms which may move into the area.

SEVERE WEATHER STATEMENT — A product issued which provides follow-up information on any severe weather warnings in effect and conditions which have occurred or are occurring. This information includes updated storm paths and any storm reports, such as hail size or damage, received from spotters.

FLASH FLOOD — A rapid rise in water that occurs with little or no advanced warning, usually as the result of intense rainfall over a relatively small area in a short amount of time. Flash Floods can also be caused by dam or levee failures, ice jams, and topography.

FLASH FLOOD WATCH — Issued to indicate current or developing hydrologic conditions that are favorable for flash flooding in and close to the watch area. When a watch is issued, be aware of any potential flood hazards. Those in the affected area are urged to be ready to take quick action if a Flash Flood Warning is issued or flooding is observed.

FLASH FLOOD WARNING — Issued when flash flooding is in progress, imminent, or highly likely. Those in the affected area should evacuate immediately or move to higher ground if possible. Information in this warning will include the locations in the flood and any areas which may be impacted. Flash Flood Warnings can be issued without a Flash Flood Watch in effect.

National Weather Service

Thunderstorm Safety

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Thunderstorms are a common occurrence across Nebraska, and if the right conditions exist, some will become severe. Recall that if a thunderstorm produces hail equal to or greater than one inch in diameter (quarter size), winds equal to or greater than 58 miles per hour, or a tornado, it is considered severe. Even though thunderstorms can and do occur at any time of the year, the most common time for thunderstorms, and especially severe thunderstorms, is during the spring, summer, and early fall.

There are many dangerous aspects of thunderstorms, severe or not, that pose a threat to life and property.

Lightning – Occurs with ALL thunderstorms.

Floods – Kills more people on average than any other severe weather hazard.

Straight-Line Winds – Can exceed 100 miles per hour and cause damage comparable to a tornado.

Large Hail – Causes millions of dollars each year in crop and property damage.

Tornadoes – Nature's most violent storm, with winds over 200 miles per hour possible.

Each year, many people are killed or seriously injured by tornadoes and severe thunderstorms despite advance warning. Some did not hear the warning, while others heard the warning but did not believe it would happen to them. The following preparedness information, combined with timely severe weather watches and warnings, could save your life. Once you receive a warning or observe threatening skies, **YOU** must make the decision to seek shelter before the storm arrives. It could be the most important decision you will ever make.

What do I do before the storm?

- ***Develop a plan of action!*** Be prepared for any hazard, and know where to go when severe weather strikes. Prior to severe weather season, make sure to identify a safe place to take shelter at home, work, school, and outdoors. Once you have a plan of action and a shelter identified, have frequent drills to ensure everyone knows what to do at all times.
- Know the name of the county where you live and the names of surrounding counties, cities, and landmarks. Warnings can be issued on a county basis and cities and landmarks will be named within the warning when possible.
- Learn your community's warning signals and evacuation plans.
- Check weather forecasts before leaving for extended periods outdoors.
- Keep a NOAA Weather Radio All-Hazards or an AM/FM radio with you, or bookmark your local National Weather Service website to get the latest weather information.
- Watch for signs of approaching storms, such as darkening skies, increasing winds, flashes of lightning, thunder, and static on your AM radio.

National Weather Service

Tornado Safety

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Tornadoes can happen at any time of the year, and at any time during the day or night. Though more common in the afternoon and evening hours, tornadoes can happen and have been reported at 2 or 3 o'clock in the morning! Many people think a tornado is always visible, but there are times, in storms which have high amounts of precipitation, it can be completely wrapped in rain, making it indistinguishable from surrounding clouds. Contrary to what some may believe, tornadoes can and do cross rivers, mountains, and big cities. For these reasons, it is very important to have a plan of action in case of a tornado.

What do I do when a tornado is approaching or a Tornado Warning has been issued?

- **SEEK SHELTER *IMMEDIATELY!* Once in shelter, take the protection position.**

Where do I go?

- **Reinforced shelters** – A basement or underground shelter is the best option. Protect your head and eyes from deadly flying debris. If no basement is available, go to the interior part of the lowest floor – such as a bathroom or closet. If possible get under something sturdy like a bench or table.
  Stay away from windows!

What should I do if I am located in...

- **Mobile Homes** – Mobile homes are particularly vulnerable to overturning and destruction from strong winds and tornadoes. Tie-downs generally will not protect a mobile home from tornadoes. If possible, leave the mobile home and go to a community shelter. If none is available, a ditch, culvert, or other low lying area may offer better protection. Have a plan of action prepared before a storm hits.

- **Schools** – Follow plans made in advance to go to a basement or an interior hallway on the lowest floor. Restrooms in the middle of buildings can also offer some shelter from flying debris. Avoid the end of any hallway that opens to the outside as well as classrooms with windows or outside walls. Stay out of auditoriums, gymnasiums, or any other structure with wide free-span roofs, as these types of structures are quite vulnerable to tornadic winds. Do **NOT** board or stay on school buses during a tornado warning! School buildings offer more protection and safety.

- **Office buildings, hotels, and shopping malls** – Go to a basement, designated shelter, or to the center of the building on the lowest level. Never stay in the upper levels of buildings, they are unsafe. Always stay inside of the building, do not seek shelter inside of cars in the parking lot. Avoid large open rooms and windows, remember that buildings with large free-span roofs are vulnerable to tornadic winds. Occupants should leave these areas and move to smaller interior areas.

- **Automobiles and other vehicles** – Abandon your vehicle and seek cover in a basement, shelter, or sturdy building. As a last resort, if no shelter is available, lie flat in a low lying area such as a ditch or culvert. Remember to protect your head by using your arms. Do **NOT** seek shelter under a bridge or overpass.

- **Open country** – If possible and if time permits, seek shelter inside. If this is not possible, lie flat in the nearest low lying area such as a ditch or culvert. Remember to protect your head by using your arms.

National Weather Service

Lightning Safety

http://www.lightningsafety.noaa.gov/

One dangerous aspect of weather that sometimes is not taken as seriously as others is lightning, also known as the Underrated Killer. In the United States, an average of 62 people are killed each year by lightning, with many more who survive strikes but suffer long lasting injuries and symptoms.

Avoid getting caught in a dangerous situation!
If you can hear thunder, you are close enough to be struck by lightning!

- Move into a sturdy building or an automobile with a metal top. The frame of the building or of a metal car body will allow the charge to be conducted away from you.
- Outdoor activities such as golfing and baseball can present a risk to those in attendance, as these take place on a fairway or ball field, both of which are wide open. Those attending rodeos or concerts in open arenas, sitting on metal bleachers or under a metal overhang, are also at risk.
- Get out of boats and away from water, as water is an electrical conductor. On the open water, you may become the tallest object and a prime target.
- If lightning is close, and *only if there is no immediate shelter available*, crouch down on your feet. Do not lie down and give lightning more surface area to strike. By crouching down you are as low as possible with the minimum amount of contact with the ground.
- When indoors, avoid using any corded and electrical appliances. Also stay away from pools, tubs, showers, or any other plumbing. Electricity can travel through wiring and plumbing, posing a risk to those in contact.
- If someone is struck by lighting, get medical help immediately. With proper treatment, including CPR if necessary, most lightning victims survive.

Did you know…

Thunderstorms do not have to be large in size or severe in nature to create potentially fatal lightning strikes.

- As a thunderstorm grows, areas of rising and descending air cause a separation of positively and negatively charged particles within the storm. At the same time, oppositely charged particles are gathering on the ground below. The attraction between the particles in the cloud and at the ground quickly grows, and once the force is strong enough to overcome the air's resistance, lightning occurs.

For safety, use the "30-30 Rule".

- Count the seconds between the time you see a lightning strike and hear thunder. If that time is less than 30 seconds, you should already be in a safe location. If you are not in a safe location, you should be heading to one immediately.
- You may go outside and resume activities after 30 minutes have passed since you last heard thunder.

To estimate your distance from lightning, use the "Flash to Bang Method".

- If you observe a lightning strike, count how many seconds pass before you hear thunder. Take that number and divide it by five to estimate your distance from the lightning in miles.

  Example: After a strike, you count to 15 before you hear thunder. 15 divided by 5 gives you an estimated distance of 3 miles.

National Weather Service

Flash Flood Safety

http://www.floodsafety.noaa.gov/

On average, more people are killed by flooding than by any other single severe weather hazard, including tornadoes, lightning, and hurricanes. Most of these deaths occur at night, when it is more difficult to recognize flood dangers, and when people are trapped in vehicles. Do you and your family know what to do in case of a flood?

Remember…

- **DO NOT** drive onto a flooded roadway.
- **DO NOT** drive through flowing water.
- If you approach a roadway that is flooded, **TURN AROUND - DON'T DROWN**.
- Drive with extreme caution if roads are even just wet or it is raining. You can lose control of your vehicle if hydroplaning occurs, which is when a layer of water builds up between your tires and the road, causing there to be no direct contact between your vehicle and the road.

If a Flash Flood Warning is issued for your area…

- **If advised to evacuate, do so *immediately*!** Act quickly to save yourself, you may not have much time.
- Get out of areas that are subject to flooding and move to a safe area before access is cut off by flood waters. Low spots such as dips, canyons, and washes are not the places you want to be during flooding!
- **DO NOT** camp or park your vehicle along streams and washes, particularly during threatening conditions.
- **DO NOT** drive if not necessary. If driving is necessary, do not attempt to drive over a flooded road, as the depth of the water is not always obvious, and the roadway may no longer be intact under the water. Never drive around a barricade, they are placed there for your protection! If your vehicle stalls, leave it immediately and move to higher ground before water sweeps you and your vehicle away.
- **DO NOT** try to walk, swim, or play in flood water. You may not be able to determine if there are holes or submerged debris, or how quickly the water is flowing, and you may be swept away. If water is moving swiftly, as little as 6 inches of water can knock you off of your feet! There is also a danger of hazardous materials polluting the water. Also remember that water is an electrical conductor, if there are power lines down, there is a possibility of electrocution.
- Always continue to monitor the situation through the National Weather Service website, http://www.weather.gov/, your NOAA Weather Radio All-Hazards, local television or radio stations.

Why is "Turn Around - Don't Drown" so important?

Each year, more deaths occur due to flooding than from any other severe weather related hazard. The main reason is people underestimate the force and power of water. More than half of all flood related deaths result from vehicles being swept downstream. Of these, many are preventable.

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2007 Nebraska Tornado Facts

Tornadoes: **46** (5 above the 1950-2007 average of 41)

Deaths: **Zero** **Injuries**: **15**

Longest Track: **55.0 miles** (Custer, Blaine & Brown Counties – May 5)
8 miles NE Arnold to 18.7 S Ainsworth

Strongest: **EF3** (Lincoln County - April 20)

Most in a county: 7 (Knox County)

Days of occurrence: **18**

Most in one day: **12** (March 28 and May 5)

Most in one month: **16** (March)

First tornado of the year: **March 24** (Keith County)

Last touchdown of the year: **September 6** (Dodge County)

2007 Monthly Tornado Totals

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Total	0	0	16	5	14	3	2	5	1	0	0	0	46	100 %
EF5	0	0	0	0	0	0	0	0	0	0	0	0	0	0 %
EF4	0	0	0	0	0	0	0	0	0	0	0	0	0	0 %
EF3	0	0	0	1	0	0	0	0	0	0	0	0	1	2 %
EF2	0	0	1	1	1	0	0	0	0	0	0	0	3	6 %
EF1	0	0	7	0	6	1	0	1	0	0	0	0	15	33 %
EF0	0	0	8	3	7	2	2	4	1	0	0	0	27	59 %

Last season's biggest…

Statewide

Hail - 4.25" (Softball size) on 3/18 near Benkleman (Dundy County) and 5/5 near Bloomfield (Knox)
Wind Gust - Est. 90 mph on 3/28 near Lake McConaghy (Keith), and on 8/22 near Arthur (Arthur)
Meas. 94 mph on 4/2 near Ogallala (Keith)

Hastings County Warning Area

Hail - 2.75" (Baseball size) on 7/12 near Elwood (Gosper), 8/20 near Central City (Merrick), and 9/6 near Oxford (Furnas).
Wind Gust - Est. 80 mph on 5/22 near Fairfield (Clay) and on 8/22 near Clay Center (Clay) & Saronville (Clay)
Meas. 79 mph on 8/22 near Inland (Clay)

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2007 Hastings County Warning Area Tornado Summary

Date	Location	Path Length	Path Width	Rating	Injuries	Deaths
April 20th	5.2 SW to 7.7 N of Gothenburg, NE	11.94 miles	1,320 yds	EF2	9	0
May 4th	1.5 SE of Gaylord, KS	0.10 mile	40 yds	EF0	0	0
May 4th	1.0 SW to 1.3W of Phillipsburg, KS	0.50 mile	75 yds	EF1	0	0
May 5th	3.0 S to 5.0 NE of Osborne, KS	7.5 miles	75 yds	EF2	11	0
May 31st	1.0 W of Prairie View, KS	0.25 mile	25 yds	EF0	0	0
August 22nd	East side of Hastings to 2.0 SSE of Hastings, NE	1.5 miles	25 yds	EF0	0	0

March - April

The change of seasons got off to a slow start as only one report of severe weather was noted in March. April changed things and thunderstorms rumbled across the area on the second, only to be followed by Arctic air and snow. Severe weather made a rousing return on April 20th in the form of hail, heavy rain and even a tornado.

- **April 2**: Severe thunderstorms rumbled from Dawson to Sherman County in south central Nebraska. Winds of 70 mph and quarter size hail were reported. In Ord, lightning struck the Evangelical Free Church. The strike caused three holes in the roof and damaged electrical equipment.

- **April 20**: A tornado crossed I-80 just west of Gothenburg, Nebraska in the evening. The twister turned over vehicles and killed a dozen head of cattle. Damage was noted at several locations along its path. The tornado was rated an EF2 on the Enhanced Fujita scale with an expected wind speed of 110 to 120 mph. The tornado was about three-quarters of a mile wide 5 miles north of Gothenburg. Softball size hail was also reported. A total of nine injuries were reported.

- **April 24**: Severe thunderstorms rumbled across most of south central Nebraska. One inch diameter hail was reported at Glenvil, Inavale and Riverton. Heavy rain on this day was the culmination of several days of rain in the area. From April 20-24, Holdrege received 7" of rain, with over 6" at Kearney and 5" at Wood River. Runoff from the heavy rain flooded county roads and ditches.

May - June

The most active time of year did not disappoint in 2007 as the severe weather started in the first week of May and continued right through June. The tornadoes were centered in north central Kansas on May 4 and 5, with the most significant twister hitting a part of Osborne, Kansas. Dozens of reports of hail and high winds rolled in the rest of May and June as several events occurred.

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- **May 4**: Two tornadoes were reported in north central Kansas. The first was a brief tornado in a field southeast of Gaylord. This tornado flipped a center pivot system and was rated an EF0. The second tornado clipped the west side of Phillipsburg. This tornado, rated an EF1, damaged rooftops, windows and trees along its 30 to 75 yard wide path. Along with the tornadoes, came wind gusts over 60 mph and hail the size of quarters across north central Kansas. In south central Nebraska, flooding was reported in Franklin and Webster counties thanks to three inches of rain. Some bridges were washed out near Naponee. There were also many reports of hail and gusty winds south and west of Hastings and Holdrege.

- **May 5**: Osborne, Kansas residents were visited by a tornado in their town on this day. The tornado destroyed two mobile homes, damaged roofs, cars, windows and two restaurants on its south to north path across town. The Circle Inn restaurant sustained major roof damage along with substantial interior damage. This tornado was rated an EF2 on its 7.5 mile path and resulted in 11 injuries. In Nebraska, thunderstorms rolled through earlier in the day with winds of 60 to 65 mph and hail. A funnel cloud was reported about 10 miles north of Lexington.

- **May 14**: Lightning struck the Sutton, Nebraska water tower and damaged some radio equipment in the tower. There were several reports of lightning strikes in Clay County that day.

- **May 29**: Three to five inches of rain resulted in flash flooding from Furnas County to Hamilton County in south central Nebraska.

- **May 31**: May wrapped up with an active weather day, including a tornado near Prairie View, Kansas. The tornado caused no damage and was rated an EF0 along its short path. There were also many reports of hail across the area, including baseball size hail 3 miles northwest of Smith Center, Kansas and golf ball size hail near Kensington and Phillipsburg.

- **June 13**: A funnel cloud was visible from the National Weather Service in Hastings. The funnel actually occurred in southwest Hamilton County.

- **June 23**: Strong winds from thunderstorms in Smith County, Kansas downed electrical poles in the Bellaire area. Power was out in Bellaire and Lebanon for nearly two hours.

- **June 27**: A rogue thunderstorm in Thayer County, Nebraska let loose a lightning bolt on the courthouse in Hebron. The strike resulted in minor damage to some computers. County employees remarked how they felt the hair on their arms stand on end and a tingling sensation just prior to the strike.

July - August

The depths of the summer months can bring stifling heat and humidity, but also some active weather. 2007 was no different as a wide array of severe weather occurred, highlighted by widespread flooding on August 1st and a brief tornado and very high winds in the Hastings area on August 22.

- **July 4**: Thunderstorms provided an early morning fireworks show in Kearney and Adams counties in south central Nebraska. 60 mph winds were recorded just before dawn at the Hastings Airport and penny size hail fell in the Wilcox area.

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- **July 8**: Tennis ball size hail fell in northern Valley County at Elyria, Nebraska. This storm was part of an area of scattered severe thunderstorms this evening, including a thunderstorm which produced minor flooding, some hail and 60 mph winds near Oxford and Beaver City in Furnas County.

- **July 12**: Once again, tennis ball size hail fell, this time near Elwood, Nebraska in Gosper County. Crops were stripped and heavily damaged in Gosper and Furnas counties. Windows were broken and vinyl siding damaged. 58 mph winds were measured at a State of Nebraska Roads Department weather sensor one mile south of Arapahoe.

- **July 15**: Thunderstorms scattered about the region dropped golf ball size hail near Osborne, Kansas. While no major damage occurred, there were various reports of hail and wind gusts to 60 mph in northern Osborne County and adjacent sections of Jewell and Smith counties.

- **July 23**: A tropical air mass over the area produced a couple of funnel clouds near York, Nebraska. Local spotter groups watched the funnels form and dissipate as they moved from the northeast to the southwest, which is a very uncommon direction for such weather features to move.

- **July 29**: Excessive rainfall of 4 to 7 inches in Hamilton County flooded rural roads and forced the Lincoln Creek out of banks. Flooding was reported throughout the county and even extended back to the Grand Island area, where just over five inches of rain fell (5.07").

- **August 1**: 3 to 8 inches of rain in the Big Sandy Creek northwest of Alexandria, Nebraska resulted in widespread flooding. A portion of a loaded 133-car coal train derailed as it passed an empty train. Runoff from the heavy rain was believed to have weakened the track bed. Bridge and county road damage in Thayer County was extensive and expensive from the flooding. Extremely heavy, but very localized rainfall in excess of 5 inches pounded the southwest side of Kearney. Widespread street flooding occurred with some cars stalled in bumper deep water. Finally, in Smith county Kansas, 2 to 4 inches of rain in less than two hours resulted in localized flooding, including water flowing over U.S. Highway 36 near Smith Center and street flooding in Lebanon.

- **August 6 and 7**: The U.S. Highway 6 and 34 corridor west of Hastings was hit hard with heavy rain, high winds and hail. Damage to trees and power lines was common as 60 mph winds ripped the area. Farther northeast, in Nance and Polk counties, heavy rain in excess of 6 inches dowsed the region causing the Davis Creek, Prairie Creek and Big Blue River to flood. Earlier in the day of the 7th, high winds of 60 mph or more moved from around Sherman Reservoir near Loup City, Nebraska, east across Howard and Nance counties. Large trees and power poles/lines dropped in the excessive wind.

- **August 20**: This was the first day of a wild period of severe weather for just about everybody in the region. On the 20th, a marriage of high winds and hail resulted in damage to crops, vehicles and some structures across Nance, Merrick and Polk counties. Winds in excess of 60 mph were common as hail as large as golf balls pounded the area. Property damage was in the thousands of dollars while crop damaged reached the millions. In north central Kansas, winds of 65 mph in Beloit caused considerable tree damage. On a farmstead in eastern Phillips County, a carport and outbuildings were destroyed by strong winds.

- **August 21**: Severe thunderstorms rolled from Gosper to Sherman counties in south central Nebraska. In Elwood, the "crow's nest" (i.e. announcer's booth) at the football field was blown apart by the wind. Baseball size hail fell along Highway 58 between Rockville and Loup City.

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- **August 22**: Minor damage was reported from a brief tornado on the east side of Hastings, Nebraska. This tornado was rated an EF0. Damage from the tornado itself was minor, but winds in excess of 70 mph caused major tree damage and some structural damage throughout Hastings. Hastings was just the beginning of a corridor of high winds which travelled east down U.S. Highway 6 across Clay and Fillmore counties. A 79 mph wind gust was reported 12 miles east of Hastings. At Saronville, a 125-foot tall grain bin was completely destroyed, after it had just been completed. Over $100,000 in electrical equipment had to be scrapped. The winds pulled the anchor bolts out of the cement slab foundation. In Fairmont, the roof was torn from a local car wash. Many pivots were overturned and numerous outbuildings were damaged or destroyed. There were numerous reports of flooding in Clay and Fillmore counties.

- **August 28**: Isolated severe thunderstorms in Webster county Nebraska caused minor damage to structures in Red Cloud. At least two homes had broken windows and large trees fell around town.

September - October

A second season of active weather often happens as we change to autumn and 2007 held true to form as hail, wind and heavy rain occurred. Even a small part of the Republican River flooded in early October.

- **September 6**: Thunderstorms ripped across a section of south central Nebraska, mainly south and west of Holdrege. A swath of crop damage, overturned pivots and minor property damage was the result from supercells passing over the area. The worst damage was in southern Gosper County and northeast Furnas County where 70 mph winds and golf ball size hail occurred. Large trees fell in the wind in Oxford along with baseball size hail. Dime size hail and 60 mph winds were reported in Franklin County. Crop and property damage easily reached several million dollars.

- **September 18**: Thunderstorms along the Highway 81 corridor from York to Hebron, Nebraska resulted in a brief funnel cloud east of Geneva and 60 mph winds at Ohiowa. Heavy rain of 1 to 3 inches was common and a few cars were stranded in the flood waters in York.

- **September 24**: Winds of 60 to 70 mph were reported in Shickley and near Clay Center, Nebraska with passing thunderstorms. No damage was reported. There was a report of a tornado near Blue Hill, Nebraska, but an off-duty National Weather Service employee reported blowing dust from the high winds, and no tornado occurred.

- **October 5**: Rainfall of 2 to 4 inches in the Elm, Crooked and Willow Creek basins caused flash flooding and eventually forced the Republican River near Guide Rock, Nebraska to spill over its banks. The river crested at 11.3 ft or just a bit above its 11 ft. flood stage. No significant damage was reported.

- **October 14 through 17**: Thunderstorms periodically moved through the region during these few days, some of which were severe. Penny to nickel size hail covered the ground on the 14th west of Arapahoe, Nebraska. The storms continued north into the Cozad area. The 17th was a bit more active as hail as large as golf balls fell in the Phillipsburg, Kansas area. Heavy rain of 2 inches in about one hour caused minor low land flooding north of town. Those thunderstorms extended north into south central Nebraska near Holbrook where golf ball size hail fell.

National Weather Service

NOAA Weather Radio All-Hazards

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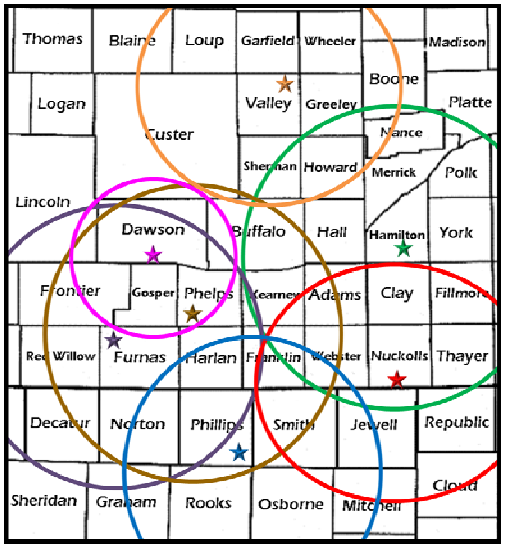

NOAA Weather Radio All-Hazards (NWR), also known as the "Voice of the National Weather Service", is a nationwide network of radio transmitters which broadcast continuous weather information from a nearby National Weather Service Office. It is one of the best and easiest ways to get weather information for your area. NWR broadcasts National Weather Service watches, warnings, statements, and forecast information 24 hours a day. Along with weather, other information including Hazardous Material Warnings, Civil Emergency Messages, and Amber Alerts can be broadcast over each transmitter. Anyone can purchase a NWR receiver, which come in a variety of styles and prices, and can be found in electronics stores across the country.

The National Weather Service Forecast Office in Hastings, Nebraska, operates seven of the NWR transmitters which serve the residents of South Central Nebraska and North Central Kansas. The above image shows the locations of the transmitters which serve residents in this area. The circles around each transmitter represent the optimal range of reception, which is approximately 40 miles. Reception of the broadcast depends on numerous factors, including the type of receiver used, terrain, weather, and distance from the transmitter.

For more information about the Hastings NOAA Weather Radio All-Hazards program, go to the link below.

http://www.crh.noaa.gov/gid/Weather_Safety/nwr/index.php

For more information about the entire NOAA Weather Radio All-Hazards program, go to the link below.

http://www.weather.gov/nwr/

Did you know…

- The average forward speed of a tornado is 30 miles per hour, but they may be nearly stationary or roar through at close to 70 miles per hour.
- Lightning can occur from cloud-to-cloud, within a cloud, cloud-to-ground, or cloud-to-air.
- A downburst is a small area of rapidly descending air beneath a thunderstorm. Once this air hits the ground, it spreads out, causing potentially damaging straight-line winds. Downbursts present an extreme danger to aviation.
- Large hail stones can fall at speeds greater than 100 miles per hour.
- The largest hailstone ever recorded in the United States fell in Aurora, Nebraska, on June 22, 2003. This hailstone had a 7 inch diameter and a circumference of 18.75 inches.

National Weather Service

Severe Weather Facts & Myths

Severe Weather Awareness Week - April 7th - 11th

Myth: Highway and interstate overpasses are safe shelters against a tornado.

Fact: Overpasses can concentrate the tornado winds, causing them to be significantly stronger. This places the people under them in an even more dangerous situation. In recent years, several people seeking shelter beneath overpasses have been killed or severely injured. Being above ground level during a tornado is dangerous.

Myth: The low pressure with a tornado causes buildings to explode. Opening the windows will equalize the pressure, saving the building.

Fact: Opening the windows in an attempt to equalize pressure will have no effect. It is the violent winds and debris that cause most structural damage. It is more important for you to move to a safe area away from windows and exterior walls. With a tornado, every second counts, so use your time wisely and take cover.

Myth: Thunderstorms and tornadoes always move from west to east.

Fact: More often than not, thunderstorms move from west to east. Conditions in the atmosphere dictate how and where storms will move, and it can be in any direction. Tornadoes have been known to act erratic, and can change directions and speed very quickly. Never try to outrun a tornado in a vehicle.

Myth: It's not raining here, and skies above me are clear, therefore I am safe from lightning.

Fact: Lightning can strike many miles away from the thunderstorm. If storms are in your area, but skies happen to be clear above you, that certainly does not imply you are safe from lightning. Though these "Bolts from the Blue" are infrequent, lightning strikes 10 to 15 miles away from the storm are not out of the question.

Myth: Since I am inside my house and out of the storm, I am completely safe from lightning.

Fact: Just because you have taken shelter inside, you are not automatically safe. While inside waiting out a storm, avoid using the telephone or electrical appliances and do not take showers or baths. Also stay away from doors and windows. Telephone lines, cords, plumbing, even metal window and door frames are all lightning conductors and pose a threat

Myth: Large and heavy vehicles, such as SUVs and pickups, are safe to drive through flood waters.

Fact: It is a common belief that the larger the vehicle, the deeper the water it can drive through. Many people do not realize that two feet of water can float most vehicles, including SUVs and pickups. If the water is moving rapidly, vehicles can be swept away.

Myth: Flash floods only occur along flowing streams.

Fact: Flash floods can and do occur in dry creek or river beds as well as urban areas where no streams are present.

National Weather Service

Is Your Community StormReady?

http://www.stormready.noaa.gov/

Nearly 90% of all presidentially declared disasters are weather related, leading to around 500 deaths per year and nearly $14 billion in damage. To help Americans guard against the ravages of severe weather, NOAA's National Weather Service designed the StormReady program. StormReady helps arm America's communities with the communication and safety skills they need to save lives and protect property.

Many laws and regulations exist to help local emergency managers deal with hazardous material spills, search and rescue operations, medical crises, etc., but there are few guidelines dealing with the specifics of hazardous weather response. The National Weather Service recognized this need and designed StormReady to help communities of all kinds implement procedures to reduce the potential for disastrous weather-related consequences. To be recognized as StormReady, communities must meet guidelines established by the National Weather Service in partnership with federal, state, and local emergency management professionals.

Benefits of Your Community Becoming StormReady

The StormReady program encourages communities to take a proactive approach to improving local hazardous weather operations. The program is a "win" situation for everyone involved: community leaders; the NWS; emergency managers; and, the general public. Here are just a few of the benefits your community will realize once you become StormReady:

- Improves the timeliness and effectiveness of hazardous weather warnings for the public.
- Provides detailed and clear recommendations which will help local emergency managers establish and improve effective hazardous weather operations. It can also help justify costs and purchases needed to support hazardous mitigation and emergency response plans.
- Rewards local hazardous weather mitigation programs that have achieved a desired performance level.
- Provides a means to possibly acquire additional Community Rating System points assigned by the National Flood Insurance Program (NFIP).
- Provides an image incentive to communities, which once recognized, can identify themselves as being StormReady.
- StormReady can help ensure your community is prepared for other civil emergencies.

What it Takes to Become StormReady

StormReady is a voluntary program. There is no cost to apply. Your community may need to upgrade your emergency preparedness operations to meet StormReady program guidelines. Established emergency management programs should incur little or no additional expense. The Warning Coordination Meteorologist at your local NWS forecast office will gladly help you with the process. Here is what needs to get done:

- Incorporate your community's severe weather threats into your community's hazard mitigation and emergency response plans.
- Establish a 24-hour Warning Point and Emergency Operations Center.
- Establish multiple ways to receive severe weather warnings and forecasts and to alert the public.
- Create a system that monitors weather conditions locally.
- Promote the importance of public readiness through community seminars, severe weather spotter training and by conducting emergency exercises.