Central Illinois Lincoln Logs

National Weather Service
Lincoln, Illinois

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Monitoring Hazardous Weather: Stay Informed!

By: Chris Miller, Warning Coordination Meteorologist

Nearly 10 years ago, after the devastating F4 tornado destroyed the Parsons Manufacturing Company and neighboring farmsteads near Roanoke, Illinois, we were asked "How did this violent tornado strike a big company and destroy the building, yet 150 people walked away unharmed?" The answer to this was mainly attributed to the hazardous weather plan that was put in place by the Parsons Company management team. Based on their plan and research done by numerous social scientists, my counterpart at the NWS Quad Cities office and I embarked on a campaign called PPMA – Plan, Practice, Monitor, Act!

In this article, I want to talk about monitoring hazardous weather conditions. Planning and practicing the plan are important, but if you don't monitor the conditions, then you wasted your time planning and practicing! Monitoring is what helps you make the decision to continue what you are doing or to take action by seeking shelter, evacuating, or doing something to protect yourself.

Now that the brutal winter of 2013-14 is behind us and we take part in more outdoor activities, it is important to ask yourself – "Who is paying attention to the weather?" If you have a cookout at your home and there are approaching thunderstorms with high wind, hail and/or a tornado, are you monitoring the conditions so you can tell your guests to seek safe shelter in your house? This situation came up on November 17, 2013 for more than a few people in central and eastern Illinois during the historic tornado outbreak. Fortunately, in many of the cases shared with us, people received information from a variety of sources to make the decision to take cover.

The remains of the Parsons Manufacturing Company plant on July 14, 2004. Photo by Matt Dayhoff.

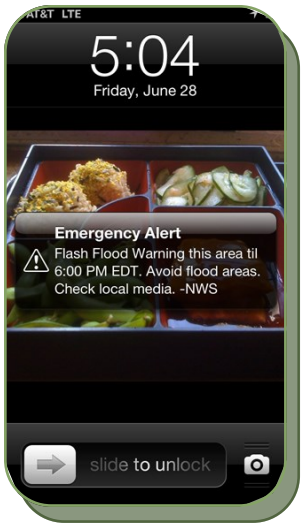
(continued on page 2)

Monitoring Hazardous Weather — Stay Informed! *(cont.)*

The key point to remember about monitoring is this – DO NOT just rely on one method! All too often we hear "…the storm sirens will let me know when it gets bad…" Outdoor warning sirens are a part of the warning notification system – not the only part! They are intended to be heard outdoors and are usually placed near schools, sports fields and parks for this reason – to alert people outdoors that they need to go inside. However, they don't give you much information, especially if you are lucky enough to hear them in your home. Outdoor warning sirens are similar to a doorbell on your dwelling – they tell you something is going on, but you need to take action to find out what.

In addition, there can be confusion regarding storm sirens. When do the sirens activate in my community? When the sirens stop sounding is the threat over? Are the sirens sounded for an all-clear? (The answer to this is **NO** in nearly every community.) If the power goes out, will the siren still sound? The answers for many of these questions vary. We encourage you to contact your local emergency services agency (ESDA, EMA or OEM) if you don't know the answers to these questions.

There are other NUMEROUS ways to monitor weather conditions which are either free – or very inexpensive. Weather Alert Radios have been called "personal storm sirens" or "as important as a smoke detector." These inexpensive devices will alert you to hazardous weather in or near your location as soon as we at the NWS issue a watch or warning. They can be programmed so you only receive the alerts for the county you live in. The best thing about weather alert radios is they are portable and have a battery backup if you lose power or don't have a power source (like if you are camping or fishing). During the damage assessments we conducted after the November 17th tornado outbreak, MANY people told us that it was their weather radio that alerted them and literally saved their life.



Another fairly recent addition to the warning dissemination toolbox is the Wireless Emergency Alert (WEA) for cell phones. Almost all cell phones purchased within the past year have this capability. The WEA is a broadcast of warning information to cellular devices by nearly all of the nation's cell providers. The warning looks like a short text message and is accompanied by a loud audible alert. Tornado Warnings and Flash Flood Warnings are two of the alerts you will receive. If you are travelling, and you drive into an area that was placed under a warning several minutes prior, your device will receive the alert as soon as you enter the cell tower's coverage area included in the warning. The best part is there is no charge to receive these messages! Again, there were many documented cases of people all across the Midwest taking protective actions last November 17th when they received these alerts.

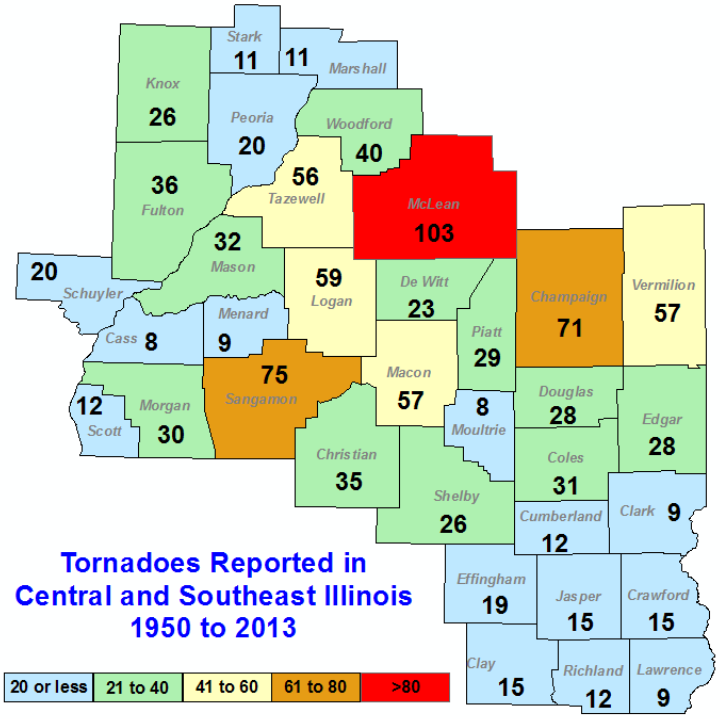
Last, but certainly not least, our partners in the broadcast media continue to do a great job of keeping everyone informed about hazardous weather warnings through TV and radio. Through live "cut-ins", scrolling messages or small color-coded maps, timely watches and warnings are shared with viewers and listeners. Many media outlets also offer free weather and warning apps for mobile devices, and numerous newspapers post warning information on their web pages.

The main message is this – stay informed about hazardous weather threats. There are multiple ways to monitor hazardous weather so you can get the information you need to make important decisions about your safety.

Severe Weather Safety Rules

Tornado Safety:

- In a home, go to the basement and get underneath the stairwell, or a heavy piece of furniture. If your home has no basement, go to an interior hallway, closet or bathroom without windows on the lowest floor.
- If you live in a mobile home, seek shelter from severe thunderstorms and tornadoes in a more secure building – well before the storm approaches. Do NOT take refuge in a garage, shed or automobile.
- In schools, hospitals, nursing homes, churches, stores, restaurants, office buildings and other places where people work or gather – go to a small interior room on the lowest level. If sheltering in a hallway, make sure it is an INTERIOR hallway, with no outside doors on either end!! Stay away from windows and exterior doors. Avoid large spaces, or large rooms, such as gymnasiums, cafeterias or auditoriums.
- In high rise buildings, go to the interior halls or bathrooms on the lowest floor possible.
- In large shopping centers and malls, avoid large open areas, areas with glass "sky lights", and exterior walls, doors and windows. Go to interior hallways or restrooms on the lowest floor possible. Do not attempt to escape in a vehicle.
- If a tornado is approaching and you are in a vehicle, seek shelter in a nearby reinforced building. As a last resort, lie flat in a ditch and cover your head.
- Don't try to outrun a tornado in your vehicle and NEVER seek shelter under a bridge or highway overpass.



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Severe Weather Safety Rules

Lightning Safety:

- If you are outdoors and a thunderstorm approaches, don't stand under trees! Get to the nearest indoor shelter which has surrounding walls, and closed windows and doors. Open buildings such as a picnic shelters, garages or sheds will NOT protect you from lightning.

- A closed, hard-top metal vehicle is also a safe place to be if you are caught outdoors during a thunderstorm. Vehicles can be struck by lightning (the rubber tires do NOT protect the vehicle), but as long as you are not touching any metal and the windows are closed you will be protected.
- If you are boating, swimming or taking part in any other outdoor water activities, get out of the water when storms are approaching and seek safe shelter indoors or in a hard-top vehicle.
- Indoors – avoid using electrical appliances, corded telephones and any fixture that is connected to metal pipes during a thunderstorm. Cordless phones and cell phones are safe to use indoors during a thunderstorm, as long as they are not in a charging base or plugged into an outlet.

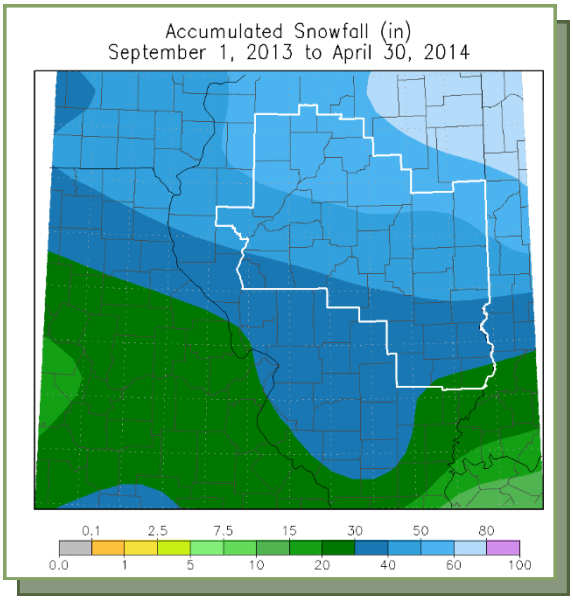
Flash Flood Safety:

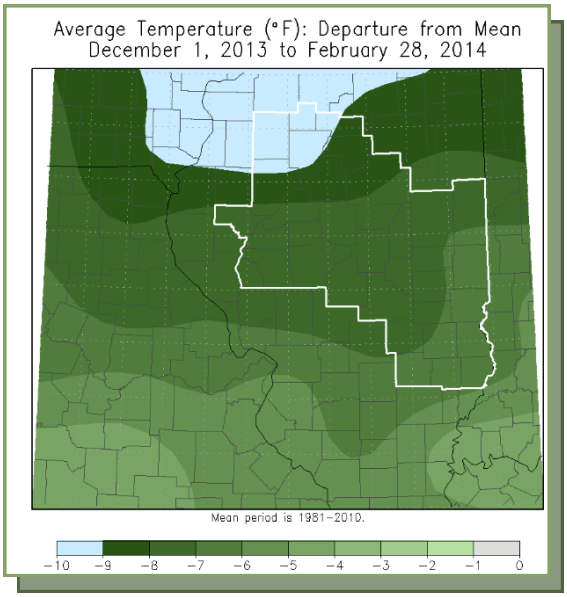
- Get out of areas subject to flooding and get to higher ground immediately.
- If told to evacuate, do so immediately. Be sure to lock your home as you leave. If you have time, disconnect utilities and appliances.
- Don't go into a basement, or any room, if water covers the electrical outlets or if cords are submerged. If you see sparks or hear buzzing, crackling, snapping or popping noises — get out! Stay out of water that may have electricity in it!
- Do not walk through flood waters. It only takes six inches of moving water to knock you off your feet. If you are trapped by moving water, move to the highest possible point and call 911 for help.
- Do not drive into flooded roadways or around a barricade. Water may be deeper than it appears and can hide many hazards (i.e. sharp objects, washed out road surfaces, electrical wires, chemicals, etc). A vehicle caught in swiftly moving water can be swept away in a matter of seconds. Twelve inches of water can float a car or small SUV and 18 inches of water can carry away large vehicles.

Winter 2013-14: Unusually Cold and Snowy

It seemed like it took forever to end, but the winter season finally gave way to flowers and trees budding by mid April. This came as a great relief to many people, who lived through what was an usually cold and snowy winter for central Illinois. Snowfall was double or even triple what would normally occur during the winter season, in some cases surpassing the seasonal normal by early January! Even as late as April 14th, as much as an inch of snow fell in some areas north of I-74.

Locati0on	Season Snowfall (Sep-Apr)	Rank	Season Temperature (Dec-Feb)	Rank
Danville	45.2”	2nd place	23.5°F	7th place
Decatur	37.8”	5th place	22.6°F	6th place
Effingham	35.9”	7th place	24.1°F	6th place
Galesburg	48.9”	3rd place	16.5°F	2nd place
Havana	50.7”	3rd place	N/A	N/A
Jacksonville	32.8”	12th place	22.6°F	7th place
Lincoln	*46.3”*	*1st place*	*20.6°F*	*1st place*
Normal	51.5”	2nd place	19.1°F	2nd place
Olney	28.1”	9th place	25.1°F	4th place
Paris	44.8”	6th place	21.6°F	4th place
Peoria	*57.6”*	*1st place*	20.2°F	8th place
Springfield	45.7”	3rd place	22.8°F	8th place
Urbana	43.5”	6th place	21.5°F	9th place





COOP Corner — Weather Coder's "Superform"

By: Billy Ousley, Data Acquisition Program Manager

Look, Up on the Screen…Is It a Web Page? Is It a Form? It's Superform!

Day	Max temperatur	Min temperatur	At observatior	Precipitation	Multi-d Accumu	Snowfall	Snow depth	Observation period weather
1	30	23	24	0.00	1	0.0	0	Fog
2	30	24	26	0.00	1	0.0	0	Fog
3	34	26	29	0.00	1	0.0	0	Fog
4	49	21	21	0.00	1	0.0	0	
5	26	3	4	0.00	1	0.0	0	
6	18	4	5	0.00	1	0.0	0	
7	18	5	13	T	1	T	T	
8	21	13	13	0.07	1	0.8	1	

Sample of the Superform. The online form only shows columns for what is actually observed.

Initiated in 2012, the Superform platform for providing observation data has proved quite useful. No more searching for the correct column to enter your data. No more wondering if you missed entering any data. You now can have a special page just for the observations you take. The Superform is based upon input from observers in the field, the NWS and other "experts" with a vested interest in figuring out how to send us your valuable observations.

Just to familiarize some that may not have visited the Superform; it is a feature of the WxCoder III webpage, you can now enter your information directly into the Superform. This form will show just the information you record. When you are set up with WxCoder, your NWS Representative will let WxCoder know what information you provide. In addition, your input gets checked for errors right away. Even the best of us have fumbled at the keyboard and mixed up numbers.

You also will see the full month of data so you can add any missing information in case you were-n't home to enter it.

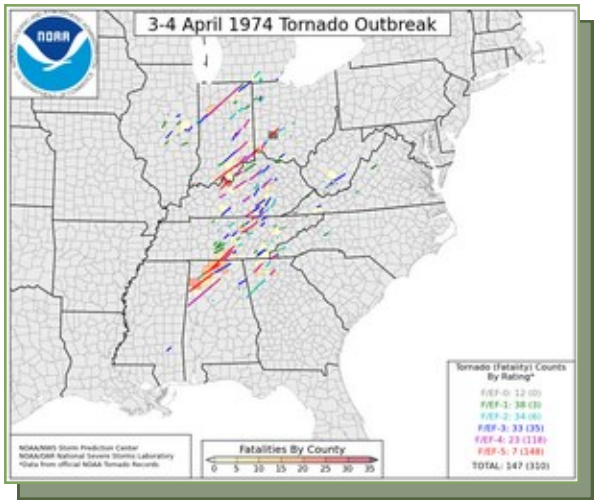
If you prefer to write your observations before entering it, you also can print a blank Superform for just that purpose.

Coming soon, Superform's smaller companion: Mobile Form! An observation form designed to be used from a mobile device such as your smart phone.

40th Anniversary of Tornado "Super Outbreak"

By: Chris Geelhart, Meteorologist

On April 3, 1974, the beginning of a widespread severe weather outbreak was occurring in Illinois. Within a 24 hour period, a total of 148 tornadoes occurred in 13 states (Illinois, Indiana, Michigan, Ohio, Kentucky, Tennessee, Alabama, Mississippi, Georgia, North Carolina, Virginia, West Virginia, and New York), as well as Ontario, Canada. This stood as the largest tornado outbreak on record, until 358 tornadoes occurred over a 4 day period from April 25-28, 2011.



Mapping of the tornadoes that occurred during the Super Outbreak. Red tracks were for tornadoes ranked as F5, the highest value on the Fujita Scale..

This tornado outbreak killed 319 people across the nation, and was the deadliest tornado outbreak since April 5-6, 1936, when 454 people were killed over the southeast U.S. (primarily in Tupelo, MS, and Gainesville, GA). The 1974 outbreak remains the most violent on record, with 30 tornadoes ranked as F4 or F5 on the Fujita Scale.

The outbreak began in Illinois early afternoon Central time on April 3. Twelve of the 148 tornadoes in this outbreak touched down in the state. Four of them were of F3 strength; these affected portions of Macon, McLean, Champaign, and Vermilion Counties. The one in Decatur did the most damage. Two deaths were reported in the state, with 30 injuries.

More detailed information on each tornado is available on our homepage at http://www.crh.noaa.gov/ilx/?n=3apr1974

Winter Climate Statistics

(December 1 through February 28)

Peoria:

- Average temperature: 20.2°F (7.4°F below normal)
- Total precipitation: 6.36" (0.37" above normal)
- Total snowfall: 49.6" (29.4" above normal)
- 8th coldest winter on record
- 2nd snowiest winter on record

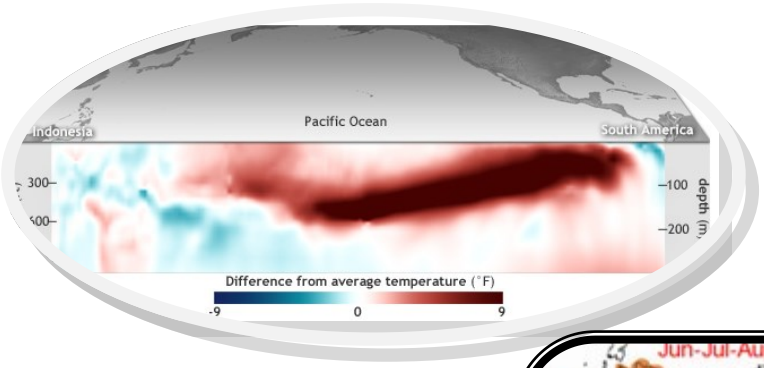
Lincoln:

- Average temperature: 20.6°F (7.9°F below normal)
- Total precipitation: 6.17" (0.22" below normal)
- Total snowfall: 41.1" (23.2" above normal)
- Coldest winter on record
- Snowiest winter on record

Springfield:

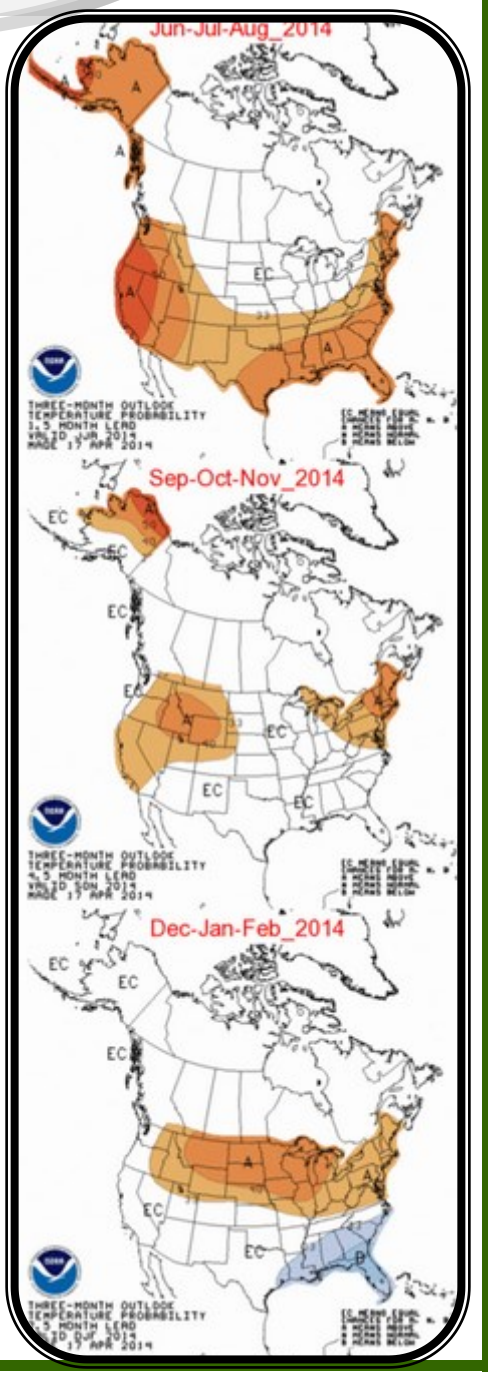
- Average temperature: 22.8°F (6.6°F below normal)
- Total precipitation: 7.03" (0.88" above normal)
- Total snowfall: 41.6" (q4.1" above normal)
- 8th coldest winter on record
- 2nd snowiest winter on record

El Niño Expected to Develop This Year



Signs are currently pointing to the development of El Niño conditions in the Pacific later this year. An El Niño is a warming of Pacific waters near the Equator, which can alter weather patterns around the globe. In the image above, from April 18 , the warmer waters, within about the top 600 feet of ocean water, are shown in the darker red shades west of South America. NOAA forecasters issued an El Niño Watch in early March.

The maps at right show the temperature trends for this coming summer, fall, and winter (from top to bottom). Areas with orange and red shades indicate where temperatures are favored to be above normal. Little trend is shown for our area during the summer and fall, but the winter is currently favored to be warmer than normal (likely a much welcome prospect, considering the winter we just went through!).



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