



National Weather Service
Lincoln, Illinois

Central Illinois Lincoln Logs



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National Severe Weather Preparedness Week

By: Chris Miller, Warning Coordination Meteorologist

Severe weather has already threatened many parts of our country, including parts of Illinois, with devastating impacts. No part of Illinois is immune to the threats of severe weather, especially during the peak of our severe weather season from April through June.



Are you prepared for tornadoes, severe thunderstorms and flash floods? Do you have a secure storm shelter to go to if a tornado or high winds threaten? Are you prepared with enough essential items to get through several days without power? If you answered no to any of these questions, **NOW** is the time to get ready.

This year, the week of April 22nd – 28th is the first National Severe Weather Preparedness Week. Last year during that week in April, hundreds of tornadoes impacted large parts of the United States, killing more than 300 people, injuring thousands and causing billions of dollars in damage.

Be a Force of Nature: Know Your Risk, Take Action, Be an Example.

Know your risk:

Each year, many people are killed or seriously injured by tornadoes and other types of severe weather, despite advance warning. In 2011, there were more than 1,000 weather-related fatalities and more than 8,000 injuries.

Because severe weather knows no boundaries and affects every individual we're calling on people across the country to *be a force of nature* in their communities to prepare for severe weather.

Take action:

The National Weather Service and local Emergency Management Agencies are just one part of the emergency management team that works to prepare and respond to disaster. A key member of the team is the public. That is why we are encouraging everyone to do their part and prepare now, so that you know what do when severe weather strikes.

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National Severe Weather Preparedness Week (cont.)

This year, we ask families, communities and businesses *to be force of nature* by taking the pledge to prepare. When you pledge to prepare, you will take the first step to making sure that you and your family are prepared for severe weather. These include developing a family communications plan, putting an emergency kit together, keeping important papers and valuables in a safe place, and getting involved. Visit Ready.gov/severeweather for more on family preparedness for severe weather.

Be an example:

Studies show that individuals need to receive messages a number of ways before taking appropriate action. Many are more likely to act when the messages are received from a trusted source- Family, Friends, or a Community leader.

Once you have taken action, share your story with your family and friends by using social media sites to spread the word about threatening weather.

Need ideas for what you can do?

Have an emergency plan, and know what to do before severe weather strikes. Identify an appropriate shelter in your home, neighborhood and community ahead of time. Share this with your neighbor.

Learn how to strengthen your home and business against severe weather. Pass this on at a community gathering or faith-based meeting.

Find out from local emergency management how you will be notified for each kind of disaster and sign up for additional alerts through social media and local news. Understand these local warning systems and signals, and share your knowledge with your coworkers, friends.

Web Pages for Severe Weather Preparedness Information:

NWS Lincoln Severe Weather Preparedness:

<http://www.weather.gov/lincoln/?n=severe-prep>

State of Illinois Preparedness Page:

<http://ready.illinois.gov>

FEMA Preparedness Page:

<http://www.ready.gov/severeweather>

Vermilion County Declared StormReady



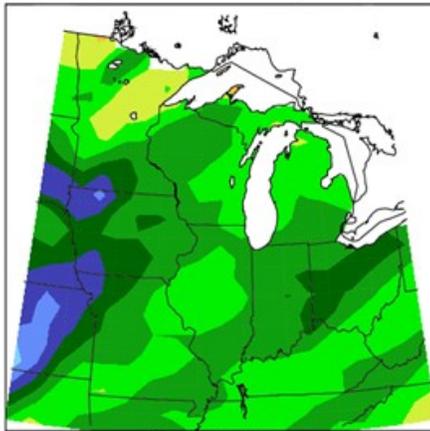
The National Weather Service recently declared Vermilion County to be StormReady, in a presentation made to the county board on April 17. Vermilion County is the 17th Illinois county to receive this declaration, and the 81st entity in the state (including 56 cities/villages, 5 universities, 2 commercial sites, one military installation, and 10 supporting sites.

(l-r): Chris Miller, Warning Coordination Meteorologist; Rick Harper, Vermilion County EMA Severe Weather Coordinator; Ted Fisher, Vermilion County EMA Director; Patrick Bak, Senior Meteorologist

What Happened to Winter?

Winter 2011-2012 produced less than 50% of normal snowfall for much of Central and Southeast Illinois, while temperatures averaged 4-6 degrees above normal. This is in stark contrast to the past three winters which produced above normal snowfall and below normal temperatures for much of the area. The maps below from the [Midwestern Regional Climate Center](#) highlight the relatively warm and snow free weather. While snowfall was well below normal, precipitation total (including rain) was near normal.

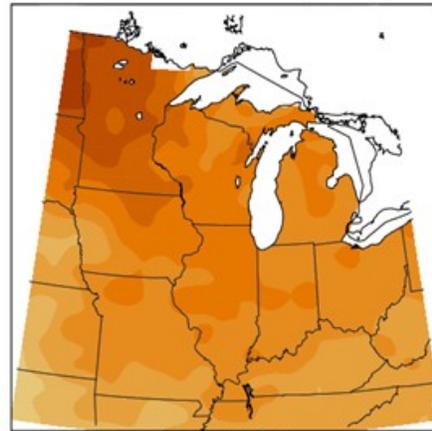
Accumulated Precipitation: Percent of Mean
December 1, 2011 to February 29, 2012



Mean period is 1981-2010.
25 50 75 100 125 150 175 200 300

Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

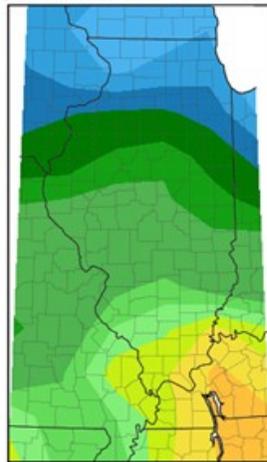
Average Temperature (°F): Departure from Mean
December 1, 2011 to February 29, 2012



Mean period is 1981-2010.
0 1 2 3 4 5 6 7 8 9

Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

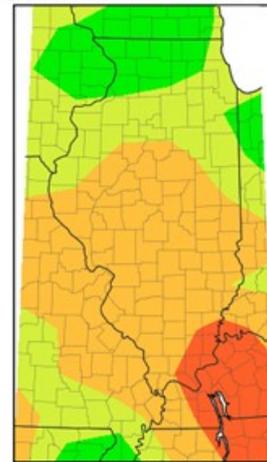
Accumulated Snowfall (in)
September 1, 2011 to March 6, 2012



0.1 1 2 3 4 5 7.5 10 15 20 25 30 40

Illinois State Climatologist Office, www.isws.uiuc.edu
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

Accumulated Snowfall: Percent of Mean
September 1, 2011 to March 6, 2012



Mean period is 1981-2010.
10 25 50 75 100 125 150 175 200

Illinois State Climatologist Office, www.isws.uiuc.edu
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

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What Happened to Winter? *(continued)*

Peoria:

- 4th warmest winter on record, and 5th least snowiest
- Average temperature: 33.6°F (6°F above normal)
- Lowest temperature: 5°F on Jan. 19-20
- No days with lows of 0°F or colder (7.2 days below normal)
- Total precipitation: 5.82" (0.17" below normal)
- Total snowfall: 10.4" (9.8" below normal)

Lincoln:

- 6th warmest winter on record, and 2th least snowiest
- Average temperature: 34°F (5.5°F above normal)
- Lowest temperature: 0°F on Jan. 14
- One day with lows of 0°F or colder (5.7 days below normal)
- Total precipitation: 5.90" (0.49" below normal)
- Total snowfall: 5.4" (12.5" below normal)

Springfield:

- 4th warmest winter on record, and 3rd least snowiest
- Average temperature: 36.1°F (6.7°F above normal)
- No days with lows of 0°F or colder (5.8 days below normal)
- Total precipitation: 5.69" (0.46" below normal)
- Total snowfall: 6.4" (11.1" above normal)

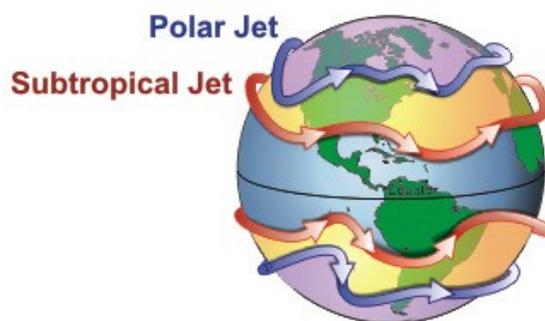
Why was this past winter so abnormal? The answer lies in the position of the jet stream, which is a relatively narrow band of strong wind in the upper levels of the atmosphere, often around 30,000 feet above ground. Wind blows from west to east in jet streams but often the flow has a northward or southward component. Jet streams move around the hemisphere in response to the location of cold and warm air masses, and help to drive storm systems. Two jet streams typically affect weather patterns across the central U.S. during winter: The Polar Jet Stream and the Subtropical Jet Stream.

The Polar Jet Stream periodically digs south from Canada and delivers rounds of Arctic air masses to the area during winter. Meanwhile, the Subtropical Jet Stream varies in position from the Mexico/Gulf of Mexico region, north into the Southern and Central U.S. This jet stream delivers relatively warm and moist air north into the mid-latitudes. Several

times per winter these two jet streams merge to produce large and powerful winter storms capable of producing everything from heavy rain severe weather in the Southern U.S. to heavy snow and blizzards across the central and northern U.S.

The unusual aspect of this past winter was the tendency of the Polar Jet Stream to remain anchored well north across central Canada, therefore infrequently dipping south into the central U.S. to bring frigid temperatures. Since Arctic air was lacking, most of our weather systems were driven by the warmer Subtropical Jet Stream, bringing rain and above normal temperatures. It is interesting to note that while our winter was mild, the dominant position of the Polar Jet Stream brought a brutally cold and snowy winter to the other side of the hemisphere, including much of Eastern Europe east through Asia and even parts of Alaska.

Ongoing climate research has shown a driving force for the location and movement of the Polar Jet Stream to be a naturally occurring pattern of climate variability. This pattern of intra-seasonal variability is called the [Arctic Oscillation](#) (AO), with a closely related index termed the [North Atlantic Oscillation](#) (NAO). These oscillations describe how air circulates around the northern part of the Northern Hemisphere, and where the "Polar Vortex", or heart of the Arctic air, sets up. When the values of these indices are negative, cold air tends to spill into the central and eastern U.S. and Canada, and the North Atlantic Ocean. When these indices turn positive, those same areas tend to be warmer than normal while the cold air is shoved to the other side of the hemisphere (Europe and Asia). The past few winters featured frequent negative AO/NAO patterns which resulted in numerous cold air outbreaks across our region. So far this winter, the indices have been dominated by positive values. As this is an area of ongoing research, predictability of these values is currently available in the one to two week time range.



Impact-Based Warning Experiment

In the aftermath of the unusually active severe weather season of 2011, the NWS conducted assessments of services provided after two of the larger tornado outbreaks, the April 27 outbreak which killed 313 people in the southeast United States, and the May 22 Joplin tornado which killed 160 people. Besides evaluating how NWS operations were conducted during these events, the teams conducting the assessments also wanted to determine why so many people were killed despite adequate warnings, and how to avoid such large losses of life in the future.



This violent tornado was photographed by Sharol Minger near Roanoke on July 13, 2004.

Some of the key findings from these assessments included:

- The majority of people sought confirmation from additional sources before seeking shelter.
- Credible, extraordinary risk signals prompt people to take protective actions.
- Perceptions exist amongst the public that “sirens go off all the time and nothing happens”.
- The existing weather enterprise dissemination system is not fully compatible with storm-based warning polygons used by the NWS.
- The majority of people identified local siren systems as their first source of warning.
- There was a lack of enhanced wording in warnings during known significant events.
- There was inconsistent use of the NWS’s “Tornado Emergency,” a relatively new term that is allowed to be used in NWS tornado warnings and severe weather statements.

Based on these findings, the NWS Central Region put together a team to evaluate the existing warning formats, and determine if the structure and wording could be enhanced to emphasize the threat in a format that would convey the impact in a clearer fashion. Five NWS offices were selected to test this new warning format: Topeka and Wichita in Kansas; and Kansas City, St. Louis and Springfield in Missouri. The new format is referred to as “Impact Based Warnings” (IBW). Because the St. Louis NWS coverage area includes portions of Illinois, the changes may be noticed on TV, radio, and NOAA Weather Radio stations in Illinois whose broadcast service area overlaps the St. Louis NWS coverage area (see box at right).

The warning test will be conducted through the end of November. The results will be analyzed by the NWS, emergency management community, and social scientists to determine any future changes or expansions to other offices.

Illinois counties included in Impact Based Warning experiment:

Adams
Bond
Brown
Calhoun
Clinton
Fayette
Greene
Jersey
Macoupin
Madison
Marion
Monroe
Montgomery
Pike
Randolph
St. Clair
Washington

Weather Folklore

By: Heather Stanley, Meteorologist

(first of a two-part series)

"Lightning never strikes the same place twice."

"Cows lay down in the field before it rains."

"Red sky at morning, sailors take warning..."

From lions and lambs in March...to groundhogs in February...for years humans have been looking for patterns in nature in an attempt to anticipate and forecast the weather. Many of the myths and wives' tales have persisted through the centuries and survive today, in an age of more advanced scientific understanding and technological advances. Interestingly, some of these myths can actually be proven by the knowledge of the atmosphere that we have today. However, some of the myths can be considered dangerous with regards to severe weather safety.

"Lightning never strikes the same place twice."

False. Ask anyone that works at the Empire State Building in New York City. The building is reported to be hit by lightning about 100 times a year. A viral video on YouTube this year shows the building getting hit 3 times in the same storm, in a relatively short time frame.

Lightning often hits the tallest object in any area; trees, cell phone towers, telephone poles, power lines, etc. If you see a tree hit by lightning, it is NOT safe to hide underneath that tree just because it has been hit once. On the contrary, the storm just picked a tall target in your vicinity. When thunder roars, go indoors. Get out of the way as quickly as possible.

"When a tornado is coming, I should open all my doors and windows to alleviate the low pressure."

False. This theory came about from many people looking at tornadoes "explode" houses. It was assumed to be a result of the low pressure associated with the tornado. Whereas the atmospheric pressure does lower in a violent tornado, that is not the destructive force. The most devastating force is the wind. In weaker tornadoes, opening the windows may, in fact, give that wind a point of entry into your home. Opening the windows is futile, at BEST. At worst, and MOST IMPORTANTLY, you are delaying getting to safety and those moments are precious. Opening windows and doors delays GETTING TO YOUR BASEMENT or SAFE PLACE. Forget the windows. Get to safety.



This lightning strike near Decatur was photographed by SWOP observer Paul Hadfield on March 11, 2006.

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Weather Folklore (continued)

By: Heather Stanley, Meteorologist

"I'm safe from lightning in my car because the tires insulate me from the electricity."

True and False. It's true that most cars are the second safest place for you to be in a thunderstorm (with windows rolled up and doors closed, of course.) But it has nothing to do with the tires on the ground! The metal framing of the car acts as a "Faraday cage", conducting the electricity around you. Faraday cages are named after Michael Faraday, an English scientist that invented them in 1836. Keep in mind, this only works with cars with predominantly metal construction. Convertibles and many cars with more fiberglass-based construction will not act as a Faraday cage.

"At least if it's raining, there won't be a tornado."

False. Many people believe that it has to stop raining before a tornado. This is based on the fact that in many tornadic supercell thunderstorms, the tornado forms in an area of the storm that is often "rain-free." However, this is a dangerous myth because tornadoes can form in a variety of environments; squall lines, warm fronts, and high precipitation supercells. High precipitation supercells, or "HP"s can be very dangerous indeed. Oftentimes, the approach of the tornado itself is obscured from sight by the heavy rainfall. Always heed warnings from the National Weather Service with regards to severe weather and your safety.

"My town is safe from tornadoes because we are protected by the river/the creek/the forest/the city/the bluff."

False. Incredibly false. Tornadoes can go wherever they want to. Cities are hit. Rivers are crossed. Bluffs are climbed. Hills are topped. In the last couple decades alone, tornadoes have become increasingly documented, helping to dispel many of these myths. Downtown metros have been hit. Major rivers have been crossed. The Internet is full of videos that will put many of these myths to rest. Don't think that just because your town hasn't been hit, that it can't be hit. Always act responsibly and get to safety.

Some examples of cities struck by tornadoes despite being near bodies of water:

- The city of St. Louis has been hit by at least 12 tornadoes, despite being along the Mississippi and Missouri Rivers. These include F4 strength storms on May 27, 1896 (killing 137 in Missouri and 113 in Illinois), September 29, 1927 (79 killed in Websters Grove and St. Louis), February 10, 1959, and April 22, 2011 (which significantly damaged Lambert-St. Louis International Airport).
- This April is the 45th anniversary of the Oak Lawn F4 tornado in northeast Illinois, which tracked across the south side of Chicago before moving onto Lake Michigan.
- Three tornadoes struck the New York City area in 2010; one affected the Bronx on July 25, and two others affected the Brooklyn and Queens areas on September 16.
- An F2 tornado injured 30 people in Los Angeles on March 1, 1983.
- During the "Super Outbreak" of April 3-4, 1974, violent tornadoes affected Louisville and Cincinnati, both on the Ohio River.

Service Hydrologist Receives Regional Award

Darrin Hansing, Service Hydrologist at the Central Illinois Forecast Office, was recently honored with the Regional Isaac M. Cline Award for Hydrology. This award is presented to individuals and teams who have made significant contributions in support of the National Weather Service.

The award is named in honor of Isaac M. Cline, one of the most recognized employees in weather service history. His courage and dedication is credited with saving thousands of lives during the Galveston, Texas, hurricane of 1900. Isaac Cline was the meteorologist in charge of the U.S. Weather Bureau office in Galveston when the popular coastal city was struck with the deadliest natural disaster in the nation's history. The death toll exceeded 8,000, but could have been much higher if not for Cline's acute understanding of the weather and his early hurricane warnings in an era when meteorology was in its infancy and ship-to-shore communications were non-existent.

Saving lives and property is the central function of the National Weather Service and the Isaac M. Cline Award demonstrates the hard work of Darrin to accomplish this goal. This award recognizes his leadership in the Central Region Hydrology Program and for outstanding Decision Support Services provided to the State of Illinois during the historic flooding along the Mississippi River last spring. As a representative of NOAA's National Weather Service, Darrin helped coordinate with local, state and federal agencies before and during the flooding, so that emergency officials could make important decisions to best protect life and limit property damage.



Darrin Hansing (left) was presented with the regional Isaac M. Cline Award for Hydrology, on March 16. NWS Central Region Director Lynn Maximuk made the presentation via conference call. Ernest Goetsch, Meteorologist-in-Charge, locally presented Darrin with the award.



NWS Not Exempt from Severe Weather Safety Rules

A significant severe weather outbreak affected the Plains on April 14. This included a strong tornado (EF-3 strength) which moved through Wichita, KS. Because of the projected path, and the fact that winds at the office were gusting to 84 mph, the staff of the National Weather Service office in Wichita was forced to take shelter for about half an hour, transferring operations to the Topeka office which serves as their primary backup. The Wichita NWS has a write-up of this experience on their homepage at the following address: http://www.crh.noaa.gov/ict/?n=april14_ked.

NWS offices typically have two neighboring offices that can serve as a backup to local operations if necessary. While safety from storms is one of the reasons to invoke backup operations (the Lincoln NWS has had to take shelter on a couple occasions), computer or communications failures are a more likely reason for such an occurrence. The Chicago NWS office serves as the primary backup for the Lincoln NWS, with the St. Louis office also available as a backup. In turn, the Lincoln NWS is a backup for both the Chicago and St. Louis offices.

During most backup operations, the local staff would handle the workload of both offices. If the backup was for an extended period of time (e.g. days), some of the staff would be sent to the backup offices to assist with operations.

Issues with Midland NOAA Weather Radio Model WR-120



Reports have been received from owners of the Midland WR-120 desktop weather radio, indicating that the unit may periodically beep and display the message "CHECK RECEPTION". This is caused by lack of receiving any warning/watch/test product within the last 10 days. Typically, the NWS will send out a test signal each Wednesday, so there should generally not be a reason for 10 days to pass without a product being received, but this has happened occasionally.

In order to silence the beeps, you can unplug the radio, remove one battery, and then replace the battery and plug the radio back into the wall. You will need to re-set the clock, but all the other programming (SAME code, transmitter frequency, alert type) is stored on a flash memory chip and is unaffected by the total loss of power. Only the clock needs to be re-set.

Other possibilities for the beep include having the radio set to the incorrect transmitter (thus the desired county code is never received during the test); the county code may be programmed incorrectly; or the signal strength is poor.

NOAA Weather Radio Information for Central and Southeast Illinois:

<http://www.weather.gov/lincoln/?n=nwr>

COOP Corner

By: Emily Timte, Meteorologist Intern

Quick Observer Notes

Unfortunately, our office will not be able to travel as much as in seasons past. This may impede our ability to make visits to the Cooperative Observing stations. As a result of fewer visits, we will still try to remain in contact often! Please look out for messages on the WxCoder homepage. We appreciate your reports, and we look forward to receiving them as we gear up for severe weather season!

Please do not hesitate to give us a call or email. We are always willing and able to discuss your observation issues, supplies, or equipment needed. Most importantly, we will discuss “you” - how you are doing, how we may help, and inquire of any suggestions you may have.

Cooperative Observer Highlight: Birds 2E

Steve Hardesty has been an official observer for the National Weather Service since November of 2010, reporting his precipitation to us every morning. He is located at Birds in northern Lawrence County. Below is his biography and a little bit about his interests and involvement with the weather.

My wife, Cindy, and I have resided in Northern Lawrence County just over 23 years. I was born and raised north of Palestine, IL in Crawford County. I have always had a keen interest in observing the weather. This interest was either inherited or instilled in me by both my father and my grandfather. I can recall both of them walking, pacing, and looking out the windows during any severe weather events. Both of them would regularly take to their vehicles during a weather event or immediately after to view the storm damage, snow, or ice.



My very first personal experience with severe weather occurred on my first birthday, February 10, 1959. That was the day that a deadly tornado ripped through St. Louis, MO, killing 21 and injuring 354. A smaller tornado struck our family home north of Palestine causing severe damage and toppling a huge, old maple tree onto the house. My father had just come home from working the evening shift and had taken us all to the basement, so none of us were injured and the house was later repaired.

My involvement with the volunteer programs of the NWS began in the early Spring of 2008. I had a habit of complaining to my wife that weather events reported on local television didn't accurately report the weather in our immediate area. We were watching the weather on local channel WTWO and the spotter training class scheduled for Lawrenceville was announced. My wife told me I should attend and then I could take it on myself to report weather data from our area. I became a SWOP observer that Spring. I later signed up as a CoCoRaHS observer in February of 2009. I volunteered for, and became, a COOP observer on November 6, 2010.

My involvement with the three volunteer NWS programs is a natural fit for me. I'm able to give to my community doing something I totally enjoy. I have met some really great people from the NWS – Lincoln office over the past few years. I hope to be able to continue my volunteer service for many years to come.

(continued on page 11)

COOP Corner *(continued)*

Cooperative Observer Accomplishments

The following observers have passed a monumental mark in their COOP history this past January, February, or March.

5 Years of Service	15 Years of Service	50 Years of Service	65 Years of Service
Ryan Williams <i>(Farmer City)</i> Jim Copes <i>(Germantown Hills)</i> Wesley Hilst <i>(Havana)</i> Lisa Vogel <i>(Peoria)</i> Robert Daniel <i>(Virginia)</i>	Bob Bishop <i>(Bloomington)</i>	WLDS Radio <i>(Jacksonville)</i> Dorothy Bullard <i>(Morrisonville)</i>	Paris Sewage Treatment Plant

Mrs. Bullard will be receiving the Edward H. Stoll Award for her length of service. We will be holding a formal presentation for her in the near future.

Hoopeston Observer Retires

After over 60 years of service, the Mushrush family has retired from cooperative observer duties at Hoopeston, in far northeast Vermilion County. John Mushrush took over the station in May 1951, and his wife Audrey has been the observer since 1999 after John passed away.

Chad Thomas will continue the Hoopeston weather records that date back to 1902.

Billy Ousley, Data Acquisition Program Manager, presents Audrey Mushrush with the Helmut E. Landsburg Award for 60 years of service on May 8, 2006.



Upgraded Rain Gages Being Deployed



The Fischer-Porter automatic rain gages are in the process of being upgraded. These gages, which have been in use since the 1960's, have previously used paper tapes which had holes punched in them to indicate the amount of precipitation; the tapes were then mailed to the office at the end of the month. The upgrades remove the punch tape technology in favor of electronic measurement, with the measured values being copied to a flash drive. The contents of the flash drive can either be E-mailed to the office, or the flash drive itself is sent back to the office each month.

John Parr (Hydrometeorological Technician) and Kyle Clark (Electronics Technician) have been working to upgrade each of the gages deployed in our coverage area, and the upgrades should be complete by the end of May.



Central Illinois Lincoln Logs

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(8:30 am to 4 pm)

The *Central Illinois Lincoln Logs* is a quarterly publication of the National Weather Service office in Lincoln, Illinois. It is available on our Internet page at

www.weather.gov/lincoln

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Record Warmth in March

Record and near-record breaking temperatures dominated the eastern two-thirds of the nation and contributed to the warmest March on record for the contiguous United States, a record that dates back to 1895. The average temperature of 51.1°F was 8.6°F above the 20th century average for March and 0.5°F warmer than the previous warmest March in 1910. Of the more than 1,400 months (117+ years) that have passed since the U.S. climate record began, only one month, January 2006, has seen a larger departure from its average temperature than March 2012.

U.S. climate highlights for March:

- Every state in the nation experienced at least one record warm daily temperature during March. [According to preliminary data](#), there were 15,272 warm temperature records broken (7,755 daytime records, 7,517 nighttime records). Hundreds of locations across the country broke their all-time March records. There were 21 instances of the nighttime temperatures being as warm, or warmer, than the existing record daytime temperature for a given date.
- A persistent weather pattern led to [25 states east of the Rockies having their warmest March](#) on record. An additional 15 states had monthly temperatures ranking among their ten warmest. That same pattern brought cooler-than-average conditions to the West Coast states of Washington, Oregon, and California.
- The [nationally-averaged precipitation](#) total was 2.73 inches, which is 0.33 inches above average. The Pacific Northwest and the Southern Plains were much wetter than average during March while drier-than-average conditions prevailed in the interior West, Northeast, and Florida. Colorado had its driest March on record.
- According to the [U.S. Drought Monitor](#), as of April 3rd, 36.8 percent of the contiguous U.S. was in drought, a decrease from 38.7 percent at the end of February and an increase from 28.8 percent a year ago on April 5, 2011. Above-average precipitation across the Southern Plains improved long-term drought conditions Texas, Oklahoma, and Kansas.
- Warmer-than-average conditions across the eastern U.S. also created an environment favorable for severe thunderstorms and tornadoes. According to NOAA's [Storm Prediction Center](#), there were 223 preliminary tornado reports during March, a month that averages 80 tornadoes annually. The majority of the tornadoes occurred during the March 2nd-3rd outbreak across the Ohio Valley and Southeast, which caused 40 fatalities. Total losses from this event are estimated to exceed \$1.5 billion dollars, making this the first event of 2012 to exceed one billion dollars in damages and losses.
- On March 9, a large weather system impacted the Hawaiian Islands, bringing extreme rainfall and severe thunderstorms. A rare EF-0 tornado hit the towns of Lanikai and Kailua on Oahu, causing minor damage. A hailstone with the largest diameter on record for the state, measuring 4¼ inches, fell on Oahu during this event.

Average Temperature (°F): Departure from Mean
March 1, 2012 to March 31, 2012

