



Central Illinois Lincoln Logs

National Weather Service, Lincoln, IL

Winter 2005-06

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Top 10 Weather Events of 2005

The staff of the National Weather Service office in Lincoln voted on the top 10 events to affect central and southeast Illinois during 2005. Here are the results.

10. Late Spring Freeze of May 3-4

Record low temperatures were recorded across much of the Midwest on May 3 and 4. In northwest Illinois, the town of Mt. Carroll tied the state's May record low temperature of 20°F. Across central Illinois, lows in the upper 20s were common north of I-72, with lows around 30 elsewhere. The coldest temperature in the area was 23 degrees at Congerville, northwest of Bloomington. Springfield tied for its second latest freeze on record on May 4th.

9. Severe Weather Outbreak of September 19

Two severe weather events affected central Illinois on September 19th. The first affected areas near and west of the Illinois River valley to around Lincoln, very early in the day. The second event developed mid-afternoon around Macomb, and moved east through early evening. As part of this event, additional storms developed a bit further south, and tracked along the I-72 corridor. Reports received were mainly of wind damage, with some reports of large hail. Two people around Champaign/Urbana were injured by vehicles being blown over in the high winds.

8. Record Cold in Early December

Unseasonably cold weather affected central and southeast Illinois the first 3 weeks of the month. Temperatures averaged 10-15 degrees below normal. Record low temperatures in Lincoln included 3°F on the 5th, and -3°F on the 7th, while Peoria fell to zero on the 5th. Several locations also saw cold high temperature records, with highs only in the single digits to about 15°F. During this period, many locations from I-72 northward saw 8-15 inches of snow, with 6-8 inches common to the south.

7. Newton F1 Tornado of November 15

Late-season severe weather affected the Ohio and Tennessee Valleys, northward into eastern Illinois. A tornado touched down in Jasper County 7 miles west-southwest of Newton, and moved northeastward along a 10 mile path. Damage was mainly to outbuildings, barns, and grain bins. Eleven outbuildings were severely damaged or destroyed. Damage to 3 homes was found, but was minor in nature. One attached garage was destroyed, with the garage carried 150 yards. Numerous trees and a few power poles were also blown down.

This tornado ranked F1 on the Fujita Scale, with estimated wind speeds of 90 to 100 mph. It ended up being the strongest tornado of the year across the area, a year which only saw 6 tornadoes across the 35-county Lincoln coverage area.

6. November 5-6 Severe Weather Outbreak

Another severe weather outbreak occurred earlier in November. Over 40 reports of severe weather were received across central and southeast Illinois, between 8 PM and 2 AM. Early

Climatological Statistics for 2006:

Peoria:

Average Temperature: 53.5° (2.7° above normal)

Highest and Lowest Temps: 104° and -5°

Precipitation: 25.42" (10.60" below normal)

Snowfall: 21.3" (5.9" below normal)

Springfield:

Average Temperature: 54.4° (1.7° above normal)

Highest and Lowest Temps: 98° and -2°

Precipitation: 31.63" (3.93" below normal)

Snowfall: 25.5" (0.6" above normal)

Urbana:

Average Temperature: 53.6° (1.6° above normal)

Highest and Lowest Temps: 96° and -1°

Precipitation: 36.38" (4.67" below normal)

Snowfall: 22.9" (3.3" below normal)

reports were of both wind damage and large hail, generally west of I-55. Across eastern Illinois, the reports were primarily of strong winds and associated damage. The highest wind speeds reported were along the Indiana border (89 mph at the Lawrenceville Airport at 1:50 AM, and 88 mph at Chrisman at 12:15 AM). These storms later affected southwest Indiana, where a tornado killed over 20 people in Evansville.

5. March 30 Severe Weather Outbreak

The first severe weather outbreak of the year began in west central Illinois across Knox and Fulton Counties early afternoon, not ending until mid evening after it moved across southeast Illinois. Many reports of large hail were received from the storms, with baseball size hail occurring north of Lexington (McLean County) and golfball size hail near Toluca, St. David, Lincoln, and Lake Bloomington. The storms also produced a tornado near Metamora in Woodford County, and a wind gust to 76 mph northeast of Lincoln.

4. Heat Wave of July

Excessive heat and humidity occurred across the region during the second part of July. Daytime temperatures ranged from the mid 90s to around 105°F. Peoria reported its first 100 degree day in 10 years with a high of 104°F on the 24th, and its warmest reading since a 105°F temperature in July 1988. The dry conditions across this region helped to temper the stifling humidity that normally occurs across this area. Across east central and southeast Illinois, although temperatures only topped out in the upper 90s, heat index values ranged from 110 to 120.

3. Ice Storm Begins the New Year

A winter storm affected much of the middle part of the nation the first week of January, as waves of low pressure moved northeast along a frontal boundary from the southern Plains to the Ohio Valley. A band of freezing precipitation fell over parts of Kansas, Missouri, Illinois and Indiana. The worst ice accumulations were across Kansas and Missouri. Ice accumulation of 1/4 to 1/2 inch occurred across portions of central Illinois, between I-72 and I-80. Numerous power outages occurred due to downed tree branches.

2. Heavy Rainfall and River Flooding of January

Unusually heavy rain occurred across central and southern Illinois during the first 7 days of January. Totals of 5 to 7 inches of rain were common south of I-70, with 2 to 4 inches further north across central Illinois. Additional amounts of 1 to 3 inches occurred east of I-55 during the second week of January. These totals combined to melt the snowpack from the pre-Christmas 2004 snowstorm, resulting in extensive flooding on area rivers. The worst flooding was along the Wabash River in southeast Illinois, where rain was heaviest and the snowpack was the thickest. Water levels along this river were at their highest levels in nearly 50 years. Levee failures caused extensive overland flooding across southeast Clark, eastern Crawford, and eastern Lawrence counties.

1. Drought

After the wet start to the year, drought conditions began to develop. Statewide, the spring months amounted to the 4th driest on record. Rainfall in May was only 25-50% of normal over much of our area, with moderate drought conditions developing over central Illinois by the end of May. Princeville reported its driest spring on record, with only 3.85 inches of precipitation. Mattoon saw its 2nd driest spring (4.75 inches), with rankings of 3rd driest at Peoria (4.16) and Havana (4.62). By the end of June, severe drought conditions extended from Jacksonville to Decatur northward. By the end of July, extreme drought affected many areas west of the I-55 corridor, from Springfield to Chicago. The worst of the drought conditions had retreated to northwest of the Illinois River Valley by the end of August, as the remnants of tropical systems helped bring relief to the southeast half of Illinois. Havana recorded its 3rd driest summer on record (5.68 inches). Other notable reports include the 6th driest summer on record in Galesburg (6.12 inches), and 7th driest at Peoria (5.13 inches). By the end of autumn, much of east central and southeast Illinois was no longer considered to be in drought, but extreme drought conditions continued from about Peoria northward.

Remember that the online climate data for our office is in a new location! Point your Web browser to <http://www.weather.gov/climate/index.php?wfo=ilx>

January 2006 One of the Warmest on Record

After the significant cold of the first 3 weeks of December, a westerly flow developed over the central part of the nation. This persisted into the first few days of February, and resulted in average temperatures remaining above normal for approximately 45 days!

Here are some climate statistics for area cities:

Location	Avg. Temp (°F)	Vs. Normal (°F)	High and Low	Rank	Records Began
Decatur	39.3	+13.5	60/21	2 nd Warmest	1883
Effingham	39.2	+12.9	63/19	2 nd Warmest	1898
Galesburg	36.9	+15.6	60/21	1 st Warmest	1948
Lincoln	38.0	+14.4	59/19	2 nd Warmest	1905
Normal	36.1	+11.9	60/19	3 rd Warmest	1893
Peoria	37.6	+15.1	60/21	(tie) 2 nd Warmest	1856
Springfield	39.0	+13.9	21/21	3 rd Warmest	1879
Urbana	37.9	+13.8	61/20	1 st Warmest	1888

Early statistics from the National Climatic Data Center indicate that the U.S. experienced its mildest January on record. Details are available online at <http://www.noaanews.noaa.gov/stories2006/s2576.htm>

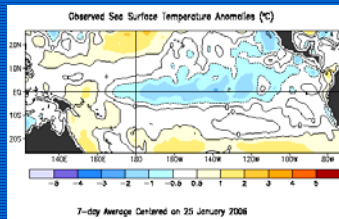
La Niña Returns

La Niña conditions have developed across the eastern Pacific. Analysis from the Illinois state climatologist indicates that impacts on the state from La Niña are not very clear cut (due to less available data for analysis), but the following trends have been noted:

- Summers in Illinois tend to be warmer and drier.
- Autumns tend to be cooler across northern parts of the state, and wetter in the southeast.
- Winters are generally warmer and wetter than average.
- Springs tend to be cooler than normal across the state, and drier than normal across the west.

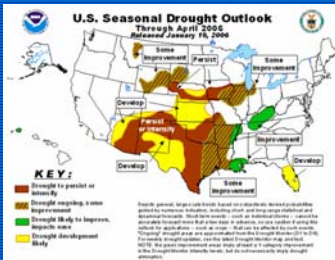
La Niña is the periodic cooling of ocean waters in the east-central equatorial Pacific, which can impact the typical alignment of weather patterns around the globe. NOAA's Climate Prediction Center predicts this La Niña event will likely remain into late spring, and possibly into summer.

For further information, visit <http://www.noaanews.noaa.gov/stories2006/s2572.htm>



Sea-surface temperatures in the Pacific compared to normal, from January 25. Blue areas indicate below normal temperatures.

Central Illinois Drought Update



The seasonal drought outlook from the Climate Prediction Center, from January 19, shows the potential for improvement in Illinois, with drought expanding across the central and southern Plains.



Some improvement in drought conditions were noted across central Illinois by the end of January. Heavy rain fell toward the end of the month, and since the ground was not frozen, was able to soak into the soil. However, the drought is still ongoing over portions of the region.

Updates are available on our web page at <http://www.crh.noaa.gov/ilx/climate/drought05.php>

Holm Award Presented to Longtime Flora Weather Observer

The National Weather Service presented the John Campanius Holm Award to Edna Hale, observer at station Flora 5NW, at a ceremony on November 12. Billy Ousley (at left in picture below), Data Acquisition Program Manager at the Lincoln NWS, was the master of ceremonies, assisted by Matt Barnes and Dan Kelly.

10-Year Length of Service Award:



Cliff Inboden of Palestine was presented with a 10-year Length of Service Award, by HMT John Parr, on November 1. Congratulations Cliff!



The Holm Award is presented to a maximum of 25 observers nationwide each year, to honor them for outstanding accomplishments in the field of cooperative observations. The award was named for a Lutheran minister, who was the first person known to have

taken systematic observations in the American Colonies, in 1644 and 1645.

Edna and her late husband Allen began observing in 1963. Besides relaying her observations daily to the NWS, Edna also passes along her data to several area newspapers. Her extra efforts in making sure the observations are taken have been shown on many occasions, whether it be due to extreme weather, illness or death in the family, or other unexpected situations.

Length of Service Awards for 2006:

10 years:

- Phillip Frank (Athens 2N)
- Linda Casper (Lewistown)
- Clarence Unkraut (Effingham 3SW)

25 years:

- Glen and Marilyn Oest (Havana 4NNE)

50 years (institution):

- Bloomington Waterworks

55 years (Ben Franklin Award):

- Audrey Mushrush, Hoopston

Special Service Awards:

For consistent and reliable observations –

- Chuck Cisne, Hidalgo 3SW
- Tom Gover, Mattoon

For supplemental winter observations –

- Joe Armstrong, Springfield
- Jeff Hurst, Peoria Airport 3SW
- Richard Pinkowski, Altona
- Larry Woller, Ogden

Cooperative Observer News

By Billy Ousley, Data Acquisition Program Manager

Cooperative Weather Observers are selected to take observations at predetermined locations in order to aid in defining the climate of an area. While Cooperative Weather Observers may take several different kinds of observations, they usually make daily readings of maximum and minimum temperatures and precipitation. A Cooperative station observation represents the "official" observation for that site/station.

Observers are usually selected from permanent residents in a community who have an interest in weather conditions, so a consistent record can be assured for that area. Observations must be taken seven days a week throughout the year. The value of data is enhanced by records that extend over a number of years. Many Cooperative Observers have served from 25 to 50 years.

This Cooperative Observer Program never ceases to amaze Meteorologists, Hydrologists and Climatologists. The program and its many successes routinely arouse the envy of other countries. All too often, those of us working within the program are lulled into complacency as, day after day and year after year, valuable information from more than 11,500 observers flows into the National Climatic Data Center.

It seems that many times the full significance of the contributions of the Cooperative Observer surfaces only when extremes in weather occur. However, be it winter snowfalls, spring time rains, summer storms, and/or crisp, cool autumn weather, the dedication and devotion to duty of the Cooperative Observer is always on display.

Cooperative Observers of Central Illinois, the National Weather Service (NWS) salutes you for your devotion to duty and civic minded attitude. Without you, our success would be limited. We continue to need your help to ensure the success in our (NWS) mission: "protection of life and property and the enhancement of the national economy."

Again, we thank you for your help.

Winter Weather Observations:

With winter is upon us, this is a good time to reflect upon the proper taking and recording methods for winter/snow observations. Entering the data correctly onto the form is a bit tricky also.

FIRST thing you need to do for the winter season is to remove the funnel and inner measuring tube from your gage. The recording rain gages only have a funnel which should be removed.

The proper method for measuring and reporting snow is as follows:

1. Melt the snow that has fallen into your gage and pour the water into the measuring tube. Measure the amount of melted water to the nearest hundredth, (i.e. 0.32) using your measuring stick.
2. Find a place that best represents the amount of NEW snow that has fallen in the past 24 hours. Using your measuring stick, measure the depth of the NEW snow to the nearest tenth (i.e. 1.2).
3. Your final measurement is the total depth of ALL snow that has fallen, both

New observers:

The following people have recently joined the ranks of cooperative weather observers:

- o Glen Hawkins, Newman
- o Alan Riley, Snicarte
- o Norbert Wessoly (Mason City)

Welcome aboard!

Hail Boards:



As a result of our continuous need for information, we hope to distribute Hail Boards to some of our observers. The hail boards will be made of Styrofoam and foil attached to a wood frame, which will allow for a recording of any hail and approximate hail size during severe weather. The additional weight added by the wood frame will make it heavy enough so that it will not blow away with the strong winds and gusts. We hope to soon be discussing this issue with some of our observers. If you wish to be involved, please give us a call and let us know of your interest.

old and new. Determine the total snow depth to the nearest WHOLE inch, rounding up or down as needed. DO NOT USE DECIMALS. (1.4 inches is recorded as 1 and 1.5 is recorded as 2)

On your forms:

- DO NOT use the “ to indicate inches.
- Use “T” for a trace, not TR or .001.
- A trace of snow is used even when you just saw a few flakes. It doesn't have to cover the ground to be considered a trace.
- Remember to record your snow depth EVERYDAY.
- Please enter a zero (0) for days when you have no precipitation. Do not use a dash (-). Do not leave this blank either (was the total 0 that day, or was the observation just not taken?).

Snowfall reports are greatly appreciated, especially during a snowstorm. Many feel that they may be “bothering” us with information we already know or have. However, most times this is simply not the case. Your reports are extremely important and help us to “get and maintain” a better handle on the winter weather situations. Many times your up to date reports allow us to adjust our forecast or issue special statements to help the communities throughout central and southeast Illinois. During the winter season we receive many phone calls from the public asking about road conditions and snowfall amounts. Your reports are used by many people. We really do appreciate the wonderful job you do.

Sending Your Data:

Due to limitations in personnel and time constraints, currently, the primary methods for reporting observations are through utilization of WXCODER II and IV-ROCS systems. Yes, many still call us and are welcome to continue to do so as this provides us with a great opportunity to ask questions and make inquiries. However, as stated, WXCODER II and IV-ROCS are now our primary methods for observations reporting. If you encounter problems or have concerns with either WXCODER or IV-ROCS, please feel free to call us and we will be happy to transmit your data for you.

If you are still calling in and have a computer and internet access and would like to give WxCoder a try, just let us know. We can set you up with this quite easily as it requires no installation of software or hardware.

Significant Weather Observer Program (SWOP) Winter Review

By Matt Barnes, SWOP Program Leader

The Significant Weather Observation Program (SWOP) is a group of volunteer observers who provide the National Weather Service with timely and accurate reports both during and after weather events. Originally developed in the late 90s here at the Lincoln NWS office, the program has grown substantially over the years, and now includes over 120 members across central and southeast Illinois. Our dedicated observers provide critical severe weather information, including reports of hail size, wind speed, flooding, and storm damage. The data they supply is utilized by NWS staff in order to assist in the warning decision and verification processes, as well as to enhance a wide range of forecast

products. SWOP members also provide day-to-day weather reports such as rainfall and snowfall totals, which in many cases have proven invaluable.

Even though Winter 2005-2006 has been quite warm so far, a number of events have occurred during which SWOP observers have provided crucial weather reports in direct support of NWS operations. The first significant snowfall of the winter season took place on December 1, 2005 when a general one to three inch accumulation was reported across all but far southeast Illinois. This was followed by an even heavier event on December 8, 2005 that blanketed the region in three to six inches of snow. The highest accumulations from around the area came from our Petersburg SWOP (6.1 inches) and our Cisco 2NE SWOP (6.0 inches). A third event on December 14, 2005 brought another one to three inches of snow. After that, the weather warmed significantly, culminating in severe thunderstorms on January 2, 2006. During this event, numerous SWOPs reported hail ranging in size from one quarter to three quarter inch in diameter. Most recently, snows returned to the area on January 21, 2006. Even though the snow was confined to areas along and north of a Canton to Minonk line, the SWOP network again came through with many accurate reports both during and after the event, including a 5.0 inch accumulation from our Henry observer.

Despite the great success of the SWOP program, there is always room for improvement. Additional observers are needed in a number of areas, but especially in the following counties: Cass, Cumberland, Edgar, Fulton, Jasper, Lawrence, Morgan, Richland, Schuyler, and Scott. For more information on how to join the SWOP program, please see our website at: <http://www.crh.noaa.gov/ilx/swop/swop.php>

Upcoming Preparedness Weeks:

*Severe Weather
Preparedness Week –
March 5-11*

*Flood Safety Awareness
Week – March 20-24*

*Lightning Safety
Awareness Week – June
18-24*

Storm Spotter Training Being Scheduled



It is getting to be that time of year again! Storm spotter training is being scheduled across central and southeast Illinois. Storm spotters provide critical weather information for their communities and to the NWS during hazardous weather events.

Anyone with an interest is welcome to attend one of these sessions. There are no fees involved, only 2 to 3 hours of your time. The first sessions are scheduled to begin in late February, and last through March and much of April.

A listing of training sessions is available on the following page:

<http://www.crh.noaa.gov/ilx/spotter2.php>

Location and contact information are included.

Lincoln NWS Staff Visited by Chinese Counterparts

A delegation of nine meteorologists from the People's Republic of China, Yunnan Provincial Meteorological Bureau (YPMB) toured the Lincoln NWS on November 28. The tour, arranged with the assistance of NOAA's International Activities office and The 21st Century Institute of Chicago/Beijing/Shanghai, was part of a two week visit to the United States by the Chinese delegation.

The visit included a tour of the forecast operations area, a discussion of NWS forecast office organization and functions, a description of the meteorological equipment used, and methods employed in training, forecasting, product quality, and data quality control. The Lincoln office had 11 staff members assist with the briefing of WFO operations and the tour of the facility. The delegation asked numerous questions about severe weather operations, equipment used by the NWS, and how customers use weather information. The Lincoln staff also shared in this multicultural experience by learning about the climate of the Yunnan Province, and the different types of remote sensing equipment utilized by the YPMB.

Yunnan Province, in the southwest region of China, is home to more than 42 million people, and 18,000 plant species – the greatest number in the country. According to the leader of the delegation, Mr. Jianbin Wang, Director General of the YPMB, the province's climate is highly diverse with snow capped mountains, tropical rain forests, and severe thunderstorms with hail, high winds and flash flooding. "The biggest challenge we face is forecasting severe thunderstorms" said Mr. Wang, through an interpreter. "We are very impressed with the technology used by the United States National Weather Service."



Forecasters Ed Shimon (foreground) and Heather Stanley (right) listen as an interpreter relays information about the Graphical Forecast Editor.



HMT Chris Geelhart (right) and DAPM Billy Ousley (left) demonstrate the AWIPS Hydroview software.



Jiabin Wang, Director General, presents a Chinese sculpture to Ernie Goetsch, meteorologist-in-charge at the Lincoln NWS.



Staff of the NWS and the YPMB in front of the Lincoln NWS office. NWS staff include (front row): Ernie Goetsch (center), Gary Jones, Heather Stanley, and Kirk Huettli; in back row, Llyle Barker, Chris Fotinos, Jeff Maurice, Chris Miller, Ed Shimon, Ed Martin, Billy Ousley, Matt Barnes, and Chris Geelhart.

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The Central Illinois Lincoln Logs is a quarterly review of NWS activities in Central Illinois and is available on our internet page at

<http://www.weather.gov/lincoln>

Your comments are welcomed and can be addressed to either editor at our office.

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Changes Coming to the Fujita Scale

The National Weather Service has announced plans to implement the Enhanced Fujita (EF) Scale to rate tornadoes, to replace the original Fujita (F) Scale. The EF Scale will continue to rate tornadoes on a scale from zero to five, but ranges in wind speed will be more accurate with the improved rating scale. The EF Scale is expected to be fully implemented by February 2007.

"The EF Scale takes into account additional variables which will provide a more accurate indication of tornado strength," said retired Air Force Brig. Gen. David L. Johnson, director of the National Weather Service. "The EF Scale will provide more detailed guidelines that will allow the National Weather Service to more accurately rate tornadoes that strike in the United States."

The F Scale was developed in 1971 by T. Theodore Fujita to rate tornadoes and estimate associated wind speed based on the damage they cause. The EF Scale refines and improves the original scale. It was developed by the Texas Tech University Wind Science and Engineering Research Center, along with a forum of wind engineers, universities, private companies, government organizations, private sector meteorologists and NOAA meteorologists from across the country.

Limitations of the original F Scale may have led to inconsistent ratings, including possible overestimates of associated wind speeds. The EF Scale incorporates more damage indicators and degrees of damage than the original F Scale, allowing more detailed analysis and better correlation between damage and wind speed. The original F Scale historical data base will not change. An F5 tornado rated years ago is still an F5, but the wind speed associated with the tornado may have been somewhat less than previously estimated. A correlation between the original F Scale and the EF Scale has been developed. This makes it possible to express ratings in terms of one scale to the other, preserving the historical database.

More information on the EF Scale is available at the Storm Prediction Center's page at <http://www.spc.noaa.gov/efscale/>