



WEATHER CURRENTS

National Weather Service, Chicago

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Serving the people of north central and northeast Illinois, northwest Indiana, and the boaters of Lake Michigan

Top Ten Weather Events of 2005 for Northern Illinois and Northwest Indiana

By Jim Allsopp, Warning Coordination Meteorologist

January 4-6 Snowstorm. A winter storm brought 6 to 12 inches of snow to north central and northeast Illinois and northwest Indiana. Areas south of the Kankakee River received up to $\frac{3}{4}$ inch of ice. Some of the heavier snow totals included 12.3 inches at Wheaton, 12 inches at Oregon, and 11.9 inches at Grayslake. Officially, 7.8 inches fell at Rockford, and 9.8 inches at Chicago's O'Hare Airport.

January 12 Record Warmth and Thunderstorms. Strong southwest winds sent temperatures soaring to 62 at Chicago's O'Hare Airport, tying a record for the date. The balmy weather was accompanied by showers and thunderstorms. A severe thunderstorm produced 60 to 65 mph wind gusts and caused damage in Sugar Grove in Kane County. Areas along and south of Interstate 80 had 1 to 3 inches of rain, which caused flooding of streams, roads, and low lying areas. This heavy rain, combined with the water equivalent from the two snowstorms, caused the January precipitation total to reach 4.00 inches in Chicago – the 8th wettest January on record.

January 21-23 Snowstorm and Lake Effect Snow. A snowstorm similar to the one that occurred earlier in the month brought another 6 to 12 inches of snow to northern Illinois and northwest Indiana. Lake effect provided additional snowfall to the lakeshore areas of northeast Illinois and also to northwest Indiana. Heavier amounts included 24 inches near Crown Point, Indiana, 15 inches on the north side of Chicago, 13 inches at Carpentersville, 12.9 inches at Midway Airport and Lake Villa. Officially at Rockford there was 7.8 inches, and at Chicago's O'Hare Airport there was 11.0 inches.

March Through December Extreme Drought. The drought was the biggest weather story for northern Illinois for much of the year. Chicago's rainfall was below normal for nine consecutive months, March through November. Rockford had below normal rainfall March through October. By June, much of northern and western Illinois was experiencing severe to extreme drought. And by the end of

summer, the region was suffering one of the worst droughts on record. Here are some spring and summer drought statistics;

- Chicago had its seventh driest spring with only 5.00 inches of rain, and its third driest summer with 5.18 inches.
- Chicago's total precipitation for spring and summer (March through August) was the fourth driest ever – 11.29 inches below normal. It was drier than 1988 or the dust bowl summers of 1934 and 1936.
- Chicago had only .76 inches of rain in June, the third driest on record.
- Rockford had 3.92 inches of rain in spring – the third driest ever, and 9.00 inches in summer.
- Rockford's total precipitation for spring and summer (March through August) was 10.23 inches below normal, and also the fourth driest on record.
- Rockford had only .43 inches of rain in March, the third driest on record.

The drought continued into fall. Rockford had only .24 inches of rain in October, the third driest on record. By the end of November much of the area had received only 45% to 55% of normal precipitation since the drought began in March. The combined nine month period of Spring, Summer and Fall was the driest on record for both Chicago and Rockford. According to the Illinois State Climatologist's Office, the northwest Illinois and northeast Illinois climate divisions experienced the driest March through November period on record.

- Chicago's total precipitation for March through November was 16.54 inches, which was 13.92 inches below normal.
- Rockford's total precipitation for March through November was 17.83 inches, which was 13.99 inches below normal.

The drought caused significant impact on the corn crop, and to a lesser extent the bean crop. Drought also prompted many communities to impose outdoor watering bans or restrictions, and some wells dried up. Streams at many locations were less than 25% of normal flow during the summer and some set new record low flows. The Vermillion River in Pontiac reported zero flow in September. Low flows caused problems for barge traffic and also for recreational boaters. The dry weather also created a high fire danger during the summer and fall.

March 30 Hail Storms - With the ongoing severe to extreme drought, there was very little severe weather in northeast Illinois and northwest Indiana during the 2005 warm season. There were no tornadoes. The biggest severe weather event of the season occurred on March 30 when thunderstorms developed in the late afternoon and evening hours dumping hail from penny size to golf ball size across northern Illinois. From about 400 PM through 830 PM there were more than 90 reports of large hail from weather spotters! This was the most prolific hail event of the year. The largest hail in the Chicago area was the size of golf balls in Yorkville, Plainfield, Romeoville, Joliet, Woodridge, and Willowbrook.

Very Warm June. Both Rockford and Chicago experienced the fifth warmest June on record. Chicago's average temperature was 74.2, which was 6.0 degrees above normal. Chicago had nine days in the 90s including the last eight days of the month. The temperature peaked at 96 on the 24th. Five nights in the last week of the month also had lows in the 70s. The average temperature for the month was 74.3 at Rockford, which was 5.5 degrees above normal. Rockford had ten days in the 90s including seven days in a row at the end of the month. The highest was also 96 on the 24th.

July 24 Heat and Subsequent Cool Down. July 24 was the hottest day of the year. The high temperature at Chicago O'Hare and Northerly Island was 102, Midway was 104 and Rockford was 99. The heat index peaked at 107 at O'Hare, 106 at Northerly Island and Midway, and 105 at Rockford. Just a few days later, temperatures tumbled nearly 50 degrees to lows of 56 on the 27th and 53 on the 28th at O'Hare. Lows at Rockford were 57 the 27th and 56 on the 28th.

Very Warm and Humid Early October. The first five days of October were unseasonably warm and it also became remarkably humid. Chicago had temperatures in the 80s four days in a row from the 2nd through the 5th. It was in the 80s the first five days of the month in Rockford. Even more unusual was the high humidity. This caused new record warm minimum temperatures to be set at Chicago on October 3, 4, and 5 and at Rockford on October 3 and 4. Lows were in the upper 60s and lower 70s. The minimum of 71 at O'Hare on October 4 tied a record for the warmest minimum ever in the month of October.

Windy November. Several powerful fall storm systems brought strong gusty winds to northern Illinois and northwest Indiana. Wind gusted over 50 mph on the 13th and from late evening of the 15th through the morning of the 16th. High winds caused power outages, brought down tree limbs, light poles and signs, and caused minor structural damage. The most severe damage was to a housing complex on South Wells Street in Chicago on the evening of the 15th. Part of a roof was torn off injuring a teenage boy and a man. On the 13th 130,000 customers lost power in northeast Illinois. Peak wind gusts on the 13th included 51 mph at Rockford, 49 mph at O'Hare, 47 mph at Midway, and 53 mph at West Chicago. On the 15th and 16th, peak gusts included 46 mph at O'Hare, 51 mph at Midway and 39 mph at Rockford. Another slightly less intense storm on the 24th brought winds gusts of around 40 mph. The powerful storm systems that brought the high winds to northern Illinois and Indiana also spawned violent tornadoes across south and central Indiana, western Kentucky, southern Illinois, and Iowa.

Cold and snowy December. A cold spell began November 30. Temperatures remained below freezing at Rockford and Chicago through December 9, the longest sub-freezing start to a December on record. The coldest air of this stretch hit on December 5, 6, and 7 with lows near zero to 10 below zero across northern Illinois and highs only in the low to mid teens. The coldest day of the month was December 19 with lows zero to 10 below and highs in the single digits to low teens. At Chicago temperatures averaged 10.6 degrees below normal for the first 20 days of December. At Rockford temperatures averaged 11.8 degrees

below normal. The season's first significant snow fell on December 8. Snow was generally 3 to 6 inches but locally 8 to 10 inches across part of Southern Cook and northern Will Counties. A plane overran the runway at Midway Airport during the height of the snowstorm, causing one fatality.

Ice Jams

By William Morris, Service Hydrologist

Ice on area streams is a normal occurrence during winter in northern Illinois and northwest Indiana. In fact, many outdoor enthusiasts anxiously await a good ice cover to provide an opportunity to skate. However, when ice begins to melt, break up, and move it can be dangerous and present a serious problem. Ice jams can develop and result in flash flooding. An ice jam occurs when ice moving down a river stops and dams up water above the jam which can result in overbank flooding. Ice jams typically form where there is a constriction or obstacles in the stream channel, at bridges, at sharp meanders in the stream, or where there is a sudden change in slope of the river bed.



Photo courtesy of Will County Emergency Management Agency

There are 2 main types of ice jams: freeze-up and breakup jams. Freeze-up jams typically occur in early winter when floating slushy ice known as frazil ice meets an obstacle in the stream or encounters a steep change in slope. Breakup jams

are more common and occur as the ice starts to melt and break apart. Melting snow or rainfall adds more flow to the stream and as the river level rises, the ice begins to break and move downstream. If it encounters an obstacle it will stop and an ice jam is formed. Water levels can rise dramatically in a short time when an ice jam occurs. In the past, ice jams have occurred along portions of the Kankakee, Fox, and Rock rivers in northern Illinois.

Keep up to date on the latest river conditions by monitoring the Advanced Hydrologic Prediction Service (AHPS) by clicking on the "Rivers and Lakes AHPS" link from our web page.

Skywarn Recognition Day

By William Wilson, Lead Forecaster

Skywarn recognition day is a day set aside for acknowledging and thanking the Amateur Radio operators who perform severe weather spotting and communications. Amateur radio operators (HAMS) operate radios out of the National Weather Service forecast offices across the United States, its commonwealths and territories. At the Chicago NWS office amateur radio operators came on the evening of December 2, 2005 and operated radios on most of the amateur radio bands. The Hams worked contacts for 24 hours until 6 pm Saturday afternoon, December 3, 2005. There was an open house on Saturday where Hams and their families could visit the weather office. The Will County Emergency Management Agency provided their emergency communications van for tours and radio operations. The city of Lockport provided an aerial lift truck for one of our antennas.

Twenty six Hams came to the office during the 24 hour period and operated radios. We made a total of 513 contacts across United States and parts of the world. Sixty three people came to the open house for tours on Saturday. The event was enjoyed by everyone who participated and was a success. We thank all who helped in setup and supported this event. We look forward to Skywarn Recognition Day 2006.



Amateur Radio Operators make contacts Saturday December 3, 2005 Skywarn Recognition Day. Photo by Bill Morris



The Will County Emergency Management Agency Communications Vehicle and the Lockport City Aerial Platform Truck at the Skywarn Recognition Day Event at the Chicago Weather Service office. Photo by Bill Morris.

Spotter Training Update

By Jim Allsopp, Warning Coordination Meteorologist

The National Weather Service, in cooperation with local emergency management agencies and amateur radio clubs, will conduct a series of basic spotter training classes in late winter and early spring. The classes are free and most are open to the public. Skywarn spotters provide a community service by reporting severe weather to community officials, who then relay the reports to the National Weather Service. A combination of timely spotter reports and Doppler radar information helps NWS forecasters make decisions about warnings which can help save lives and protect property. The spotter training classes take about two hours. In the classes people learn about severe storms hazards, how to identify cloud formations and other atmospheric clues which might lead to the formation of a tornado. Spotters also learn how to work with emergency management and amateur radio networks to relay information to local authorities and the NWS. Many spotters are community officials with law enforcement agencies, fire departments and public works departments, but many are volunteer citizens. Look for a complete schedule of training classes on our web site by mid or late January, or contact your local emergency management agency. There will be an Advanced Spotter Training Workshop at Wheaton College on March 11. This is an all day class and there is a fee. Spotters are encouraged to attend a basic spotter training class before attending advanced spotter training. For more information on the Advanced Spotter Training Workshop, contact DuPage County Office of Homeland Security and Emergency Management.

Looking for the Monthly Climate Summaries?

By Amy Seeley, Webmaster

With a restructuring of the National Weather Service offices websites, there have been some changes you may have noticed. Most notably has been the climate page of our website. One of the biggest questions I've received has been on how to retrieve the end of month summaries. Here's how you can do this:

1. Go to the following link:
<http://www.weather.gov/climate/index.php?wfo=lot>
2. Click on either the Chicago O'Hare or Rockford button on the map
3. On the left hand side under Products, click on Preliminary Climatology Data (CF6)
4. Under Location, hit O'Hare or Rockford.
5. Under Timeframe, hit the Archived Data, then click the month you are interested in.
6. Hit GO and you will get the data you are looking for.

Seasons Greetings to our Cooperative Weather Observers
By William Nelson, Observation Program Leader



Thank you for your continued dedication to the National Weather Service's Cooperative Observer program. Your commitment and hard work are very *much appreciated* by the folks at the National Weather Service Chicago forecast office.

Happy Holidays to everyone!



National Weather Service Chicago