Central Illinois Lincoln Logs

National Weather Service
Lincoln, Illinois

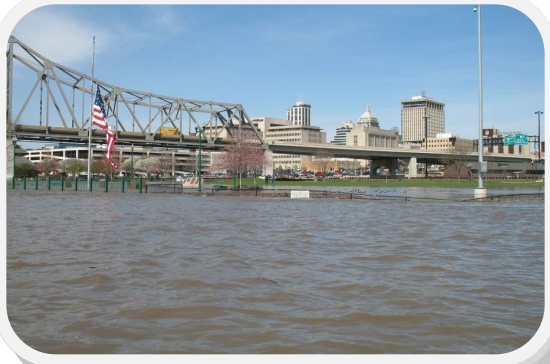
Volume 16, Issue 2 Summer 2013

Inside this issue:

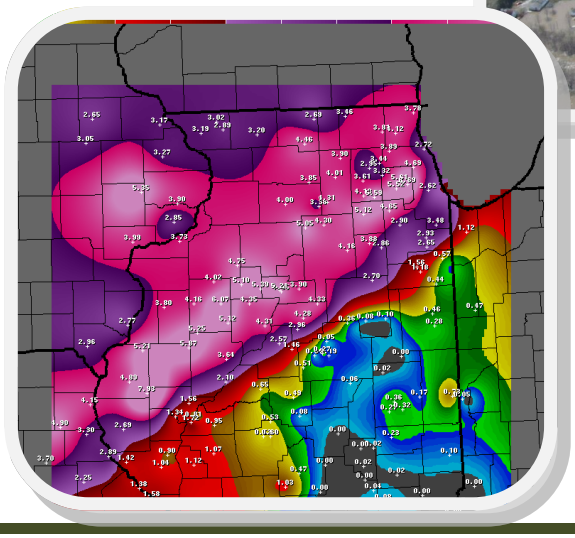
Spring 2013 Brings Record River Flooding

By: Chris Geelhart, Meteorologist

Excessive rainfall during the middle of April led to widespread flooding across a large part of northern and central Illinois. Areas from the Chicago metro, southwest along the Illinois River Valley, received 5 to 10 inches over a two day period from the 17-18th. This caused record flooding along portions of the Illinois, Spoon, and Mackinaw Rivers in central Illinois, as well as several rivers in northeast Illinois. The heavy rain shifted southward into southern Illinois and adjacent areas of central Indiana, with moderate to major river flooding in these areas as well.



The Peoria riverfront was inundated by record Illinois River flood waters in April. Photo courtesy of the Illinois Emergency Management Agency.



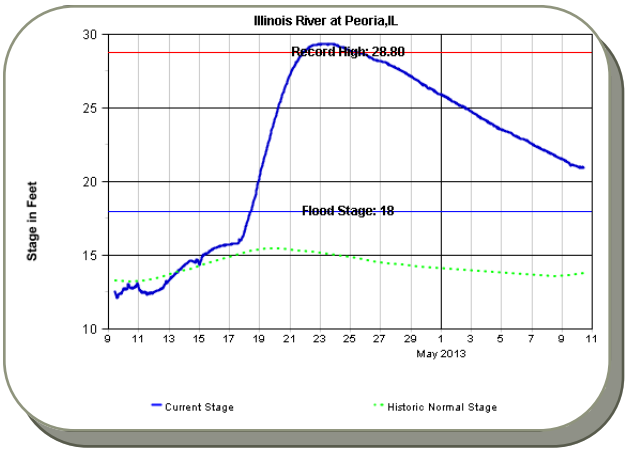
(above): Flood waters from the Spoon River inundate the village of London Mills, in northern Fulton County. Photo courtesy of the Illinois Emergency Management Agency.

(left): 24-hour rainfall ending at 7 am April 18. Pink shades represent at least 3.5 inches of rain; total of 4 to 7 inches were common along much of the middle and upper Illinois River valley.

(continued on page 2)

Record Spring River Flooding *(cont.)*

Location	New Record	Date	Old Record	Date
Illinois River at Henry	32.81	April 22	32.67	March 22, 1979
Illinois River at Peoria	29.35	April 23	28.80	May 23, 1943
Illinois River at Kingston Mines	26.58	April 24	26.02	May 25, 1943
Copperas Creek near Banner	25.52	April 24	24.70	May 25, 1943
Illinois River at Havana	27.78	April 25	27.10	May 26, 1943
Illinois River at Beardstown	29.80	April 25	29.60	May 26, 1943
Indian Creek at Wyoming	23.90	April 18	23.81	June 22, 1974
Spoon River at London Mills	Missing	Missing	28.03	June 23, 1974
Spoon River at Seville	35.82	April 20	33.10	July 26, 1993
Mackinaw River at Green Valley	28.48	April 20	28.44	Jan. 16, 2005



Clockwise from top left: Hydrograph (plot of river stage over time) for the Illinois River at Peoria, showing the record crest on April 23; flood waters inundate portions of Havana; the Illinois River encroaches on Meredosia; the Illinois River near crest at Beardstown. Flood photos courtesy of the Illinois Emergency Management Agency.

Running Wild

By: Ed Shimon, Senior Meteorologist

One of our senior forecasters, Ed Shimon, had a chance to display his new NOAA gear at a local running race in downtown Peoria. On Saturday, June 15, Ed participated in the 40th Annual Steamboat Classic, which consisted of a 4K Fun Run/Walk, a 4-mile race, and a 15K race. Ed ran the 4-mile race and finished in 31 minutes and 22 seconds, averaging 7:50 per mile. That put Ed 26th out of 132 men aged 45-49, and 493 of 3114 overall.

This particular race is regarded as the "World's Fastest Four Miles" because some of the fastest times in the world have been set there, due to the relatively flat course and helpful downhill the last quarter mile. Back in 1995, the world record 4-mile times for both men and women were set on that course. The men's record time was 17:24 or 4:21 per mile, set by Josphat Machuka of Kenya, and the women's time was 19:28 or 4:52 per mile, set by Delillah Asiago of Kenya.

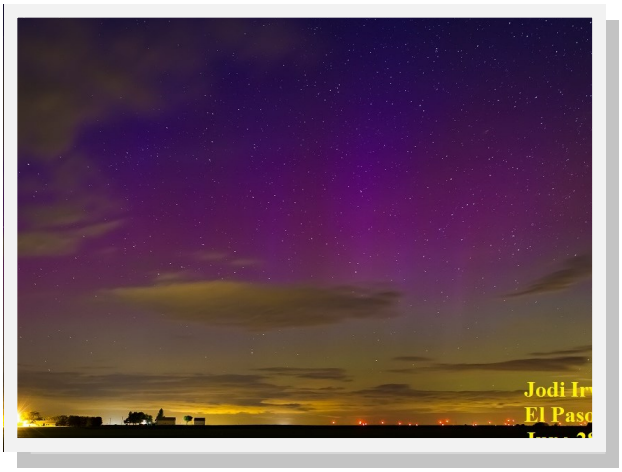
The event also boasts "Illinois' Toughest 15K" race, as runners are taken up various hills, including a large hill in scenic Glen Oak Park a couple of times. Last year, another senior forecaster, James Auten, ran that race, finishing in 1 hour 18 minutes and 10 seconds for a pace of 8:23 per mile. That put James at 28th out of 60 men aged 45 to 49, and 283 of 835 runners overall. James has also recently completed the Air Force Marathon in Dayton, Ohio, and the Lincoln National Guard Marathon in Lincoln, Nebraska.

Running races are just some of the things staff members do outside of work to stay active. Senior forecaster Pat Bak is also active in running races, and Ed Shimon also competes in triathlons – completing an Ironman race in Madison, Wisconsin, in September 2010, which consisted of a 2.4 mile swim, a 112-mile bike ride, and a 26.2 mile marathon in succession.

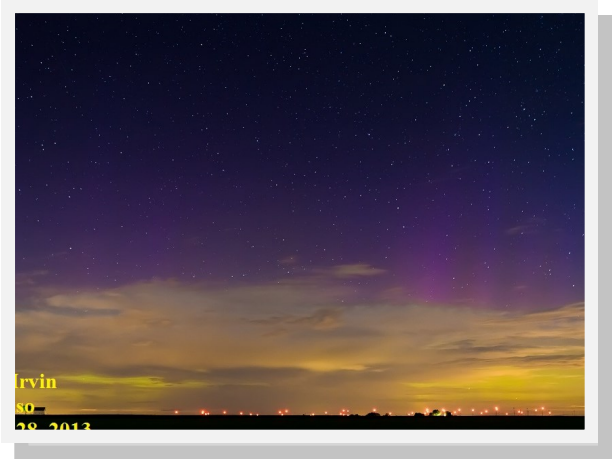
From left to right: Ed Shimon at the Steamboat Classic in Peoria on June 15; Pat Bak at the 2010 Chicago Half Marathon; James Auten at the Air Force Marathon in Dayton, OH in September 2012.

Rare Display of Northern Lights in Central Illinois on June 28

Normally, displays of the "aurora borealis", or Northern Lights, are limited to latitudes much further north, and are frequently visible in Alaska and northern Canada. (The corresponding phenomenon in the Southern Hemisphere is called the "aurora australis", or Southern Lights). However, a strong blast of solar wind on June 28 resulted in displays of the Northern Lights as far south as Kansas. These photos were taken near El Paso (Woodford County) at sunset, by observer Jodi Irvin.



Auroras are typically seen in the polar latitudes (both Arctic and Antarctic), when charged atomic particles collide with the Earth's atmosphere at very high altitudes (at a level referred to as the thermosphere). Geomagnetic storms can drive the phenomenon even further into lower latitudes. These geomagnetic storms, or disturbances in the magnetosphere, are often caused by coronal mass ejections (CME). CME's are massive bursts of solar energy originating on the surface of the sun. Auroras are more frequent and brighter during the maximum of the solar cycle, due to CME activity.



Auroras can be seen in different colors. Many are a greenish-yellow color, but some can also appear pink, red, blue, purple, and white. The color depends on the type of gas involved (nitrogen or oxygen) and the altitude.

The National Weather Service has a special office called the Space Weather Prediction Center (SWPC), located in Boulder, CO. The SWPC is the nation's official source of space weather alerts, watches and warnings. SWPC provides real-time monitoring and forecasting of solar and geophysical events which impact satellites, power grids, communications, navigation, and many other technological systems.

Space Weather Prediction Center Homepage:
http://www.swpc.noaa.gov/

Update on Social Media Usage by the Lincoln NWS

National Weather Service **Facebook** pages nationwide were transferred to "operational" status on July 11. Prior to this, Facebook pages were considered to be in an experimental state, since their launch in 2011. Since we launched our page on June 1, 2011, we have accumulated 7,113 "likes" (as of July 28 of this year), including over 1,600 since May 1!

Each day, NWS staff posts the Weather Story of the Day. We also periodically will also post climate data, features of interest, news that is happening at our office, highlights of significant weather occurrences, and more. Our Facebook page is a good way to relay observations of severe weather (or any weather) you may encounter, and including pictures is also very helpful to us in that regard! We monitor the posts that we receive on the page and do our best to respond in a timely manner, although sometimes other duties may take precedence.

Twitter remains in an experimental status, but as of July 28, the Lincoln NWS Twitter feed has 1,165 followers. We typically will post our comments using the hashtag #ILwx (Illinois weather).

Social Media Addresses for the Lincoln NWS:

Facebook — US National Weather Service Central Illinois
Twitter — @NWSLincolnIL

Spring Climate Statistics
(March 1 through May 31)

Peoria:

- Average temperature: 58.5°F (3.7°F below normal)
- Total precipitation: 20.79" (10.03" above normal)
- Total snowfall: 10.8" (7.5" above normal)
- Wettest spring on record

Lincoln:

- Average temperature: 59°F (4.1°F below normal)
- Total precipitation: 16.30" (5.93" above normal)
- Total snowfall: 12.7" (10.7" above normal)
- Tied 9th coldest spring on record

Springfield:

- Average temperature: 50.5°F (3.8°F below normal)
- Total precipitation: 19.30" (8.92" above normal)
- Total snowfall: 19.6" (16.8" above normal)
- 3rd wettest and 3rd snowiest spring on record

Central Illinois Lincoln Logs

National Weather Service
1362 State Route 10
Lincoln, IL 62656

Phone: (217) 732-3089
(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

Facebook Page:
US National Weather Service Central Illinois

Twitter Handle:
@NWSLincolnIL

Newsletter Editor:
Chris Geelhart, Meteorologist
chris.geelhart@noaa.gov

2012 Billion-Dollar Weather and Climate Disasters

According to the National Climate Data Center's 2012 Weather and Climate Disasters information, last year saw 11 weather and climate disaster events each with losses exceeding $1 billion in damages. This makes 2012 the second costliest year since 1980, with a total of more than $110 billion in damages throughout the year. The 2012 total damages rank only behind 2005, which incurred $160 billion in damages due in part to four devastating land-falling hurricanes. The two major drivers of the damage costs in 2012 were Superstorm Sandy at approximately $65 billion, and the yearlong drought at approximately $30 billion.

The 11 weather disasters, in order of occurrence, were as follows:

- **Outbreak of 75 tornadoes** on March 2-3 in the Ohio Valley and southeast U.S. (AL, GA, IN, OH, KY, TN) — $3.1 billion
- **Tornado outbreak over the Dallas/Ft. Worth metro area** on April 2-3 — $1 billion
- **Midwest outbreak of 98 tornadoes** in OK, KS, NE, IA on April 13-14 — $1.1 billion
- **Midwest/Ohio Valley (TX, OK, KS, MO, IL, IN, KY) severe weather outbreak** from April 28 to May 1, including 38 tornadoes and considerable hail damage — $3.3 billion
- **Severe weather outbreaks** from May 25-30 affecting the southern Plains, Midwest, and the Northeast — $3.3 billion
- **Severe weather over Colorado, Texas and New Mexico** on June 6-12 — $2.6 billion, including $1 billion in hail damage in Colorado alone
- **Derecho** affecting IL, IN, KY, OH, WV, SC, NC, VA, MD, DC, NJ and severe weather episodes of June 29 to July 2 — $2.9 billion
- **Hurricane Isaac** at the end of August — $2.3 billion
- **Hurricane/Superstorm Sandy** in the Northeast U.S. on October 30-31 — $65 billion
- **Western wildfires** during the summer and fall — $1 billion
- **Yearlong drought** (largest since the 1930's) including summer heatwave — $30 billion

A searchable list of all billion-dollar weather disasters (since 1980) is available at the National Climate Data Center's web site:
http://www.ncdc.noaa.gov/billions/events