



# Chicagoland Skywarn

Issue 2, Volume 1

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## Special Interest Articles:

- Weather "or-not"
- The APRS Network and Severe Weather Reporting
- Lake Michigan Water Temperatures Finally Begin to Heat Up

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*Welcome new members and readers! Do you have an announcement or would you like to write an article for our newsletter? We're looking for authors! It's simple. Contact Mike at [aa9vi@arrl.net](mailto:aa9vi@arrl.net)*

## Powerful June Storms Hit Chicagoland

By Mike Swiatkowski, AA9VI with reports from NWS website

June 19<sup>th</sup> brought severe storms to most of Chicagoland.

We'll start with the most severe weather. The NWS has confirmed an EF1 tornado with a path length of  $\frac{3}{4}$  mile and a maximum width of 75 yards touched down near Woodstock.

The reports began rolling into NWS Romeoville at 3:22 AM and the last ones came after 8PM.

A trained spotter in

Arlington Heights reported 1" of rain in 17 minutes at 3:22 AM. Basements began to flood hours later.

Friday morning was dreadful on the Bishop Ford Freeway as high water across all lanes near 111st Street caused a big problem for commuters.

A line of hail reports extended from Rockford to Chicago. A trained spotter in McHenry reported golf ball sized hail at 8:40 AM.

Heavy rains continued into the morning as one trained spotter in

Lincolnwood reported 1.78" of rain in 80 minutes!

Wind was a factor throughout most of the day causing tree limbs to call onto cars on the north side of Chicago.

Midway airport reported gusts to 62 MPH at 7:11 PM. Many other spotters reported winds greater than 50 MPH also.

## Weather "or-not"

By George Geotsalitis, NB9R

### How strong can thunderstorm winds be?

The highest microburst winds clocked were **149.5 mph**, in Washington, DC. Wind speeds in excess of 120 mph are not unusual.

### Does a rising barometer always indicate fair weather?

Normally yes, with the notable exception, that pressure can (and does) increase dramatically as large thunderstorms move toward and over a location. This atmospheric weight increase is caused by the rain-cooled air in the downdraft.



*What is CoCoRaHS?  
"It's volunteers working  
together to measure  
precipitation across the  
nation."*

*Find out more at:  
[cocorahs.org](http://cocorahs.org)*

## National Weather Service Romeoville 23 County Northern Illinois/Northwestern Indiana Liaison Repeater Plan

By George Geotsalitis,  
NB9R

As defined in the Amateur Radio Emergency Communications Course, Level 1, "Liaison stations pass information between two different nets." These stations are usually assigned by an NCS or Net Manager. In some cases, a liaison station will monitor one net full-time.

In the case of the National Weather Service WFO, Romeoville, IL, Amateur Radio Station WX9LOT will monitor one of several designated frequencies during severe weather outbreaks. The frequencies (and associated repeaters) were identified at a meeting held in January 2008 between the NWS,

ARES and other interested parties.

Echolink application was also considered for distant counties (e.g., Boone, Winnebago).

The Plan identifies two (mutually exclusive) components, the *spotter (local) repeater* and the *liaison repeater*. Given the large geographic area supported by the FishFar machine, allowances were made for alternates, namely: FrogFar (1<sup>st</sup>) and DARC (2<sup>nd</sup> alternate). One very important precept of the Plan is that the liaison repeaters would NOT conduct concurrent spotter nets on the liaison frequency. This should not suggest that individual severe weather reports cannot be handled by a liaison repeater but this

*should be the exception and not the rule.*

Each of these repeaters was assigned a number of "subtending" counties, with the expectation that spotter nets operating in these counties would employ the appropriate liaison repeater to pass severe weather reports to the NWS. Detail for the Liaison Plan can be found on the WX9LOT webpage ([www.crh.noaa.gov/lot/?n=am\\_radio](http://www.crh.noaa.gov/lot/?n=am_radio)), the DARC Skywarn Webpage (<http://skywarn.w9dup.org>), as well as the graphic below. Recently updated detail on local spotter repeaters can be found on the DARC Skywarn Page.

### NWS Chicago News

From the NWS Chicago and Rip Currents websites

warn you and your family of dangerous rip currents.

If you're headed to the beach, then you should check out the relatively new Surf Zone forecast on the NWS Chicago's website:

<http://www.crh.noaa.gov/product.php?site=lot&product=SRF&issuedby=lot>

It has a special section to

Rip currents are powerful, channeled currents of water flowing away from shore. They typically extend from the shoreline, through the surf zone, and past the line of breaking waves. Rip currents can occur at any beach with breaking waves, including the Great Lakes.

Rip currents can be killers. The United States Lifesaving Association estimates that the annual number of deaths due to rip currents on our nation's beaches exceeds 100. Rip currents account for over 80% of rescues performed by surf beach lifeguards.

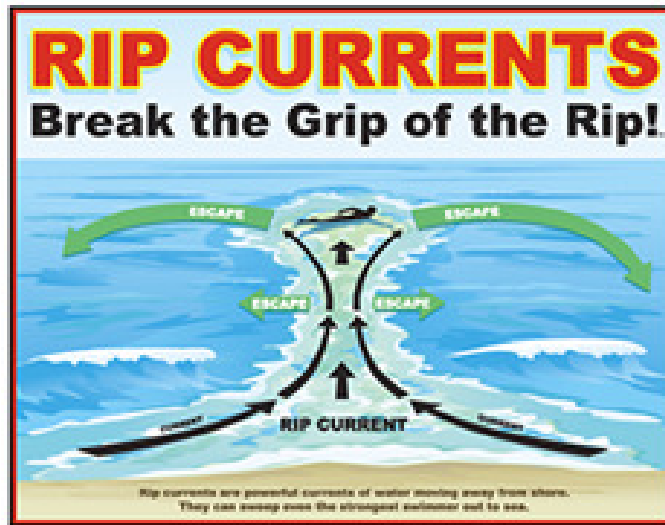
The graphic below tells you what to do if you are caught in a rip current.

*The United States Lifesaving Association estimates that the annual number of deaths due to rip currents on our nation's beaches exceeds 100.'*



Each year, more deaths occur due to flooding than from any other severe weather related hazard. The Centers for Disease Control report that over half of all flood-related drownings occur when a vehicle is driven into hazardous flood water. The next highest percentage of flood-related deaths is due to walking into or ear flood waters.

From the NWS Hydrolic Services Website



**IF CAUGHT IN A RIP CURRENT**

- ◆ Don't fight the current
- ◆ Swim out of the current, then to shore
- ◆ If you can't escape, float or tread water
- ◆ If you need help, call or wave for assistance

**SAFETY**

- ◆ Know how to swim
- ◆ Never swim alone
- ◆ If in doubt, don't go out

More information about rip currents can be found at the following web sites:

[www.ripcurrents.noaa.gov](http://www.ripcurrents.noaa.gov)  
[www.usla.org](http://www.usla.org)



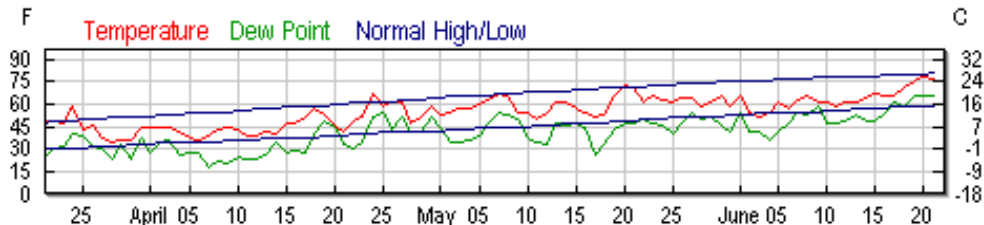
## Spring 2009 Climatology – O’Hare

From the Weather Underground

[wunderground.com](http://wunderground.com)

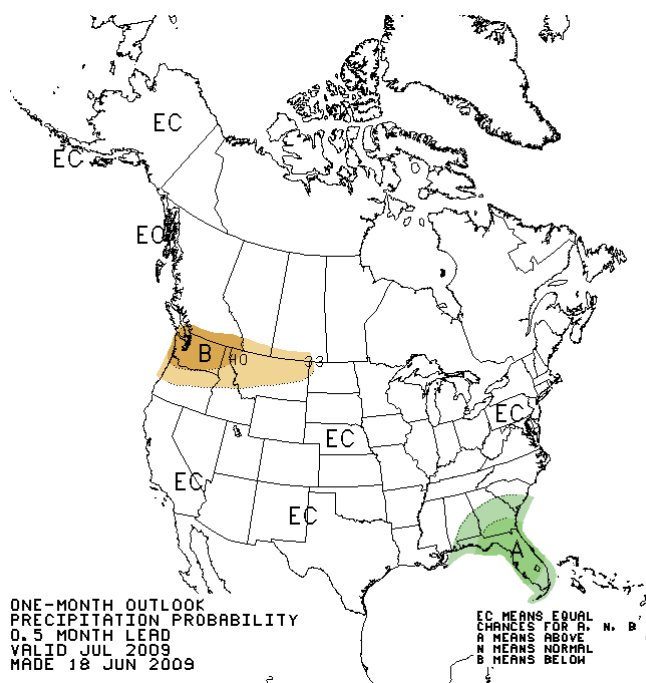
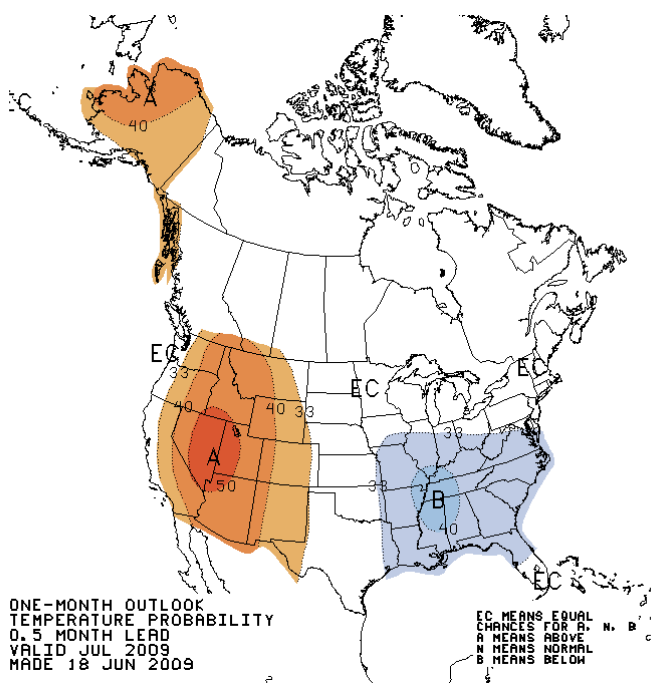
You can see that we indeed did have a cool spring 2009. High temperatures were 10-15 degrees cooler on many days. Early to mid April and early to mid June showed much below average temperatures.

So far this month O’Hare has reported 25.45” of precipitation for the year which is 9.33” ABOVE normal.



## July Climate Outlook- Temperature and Precipitation

From the NWS Climate Prediction Center



## The APRS Network and Severe Weather Reporting

By Mike Swiatkowski, AA9VI (image from aprs.org)

Let's imagine a severe storm comes to an area and wipes out the cell phone network and causes tree limbs to fall on utility lines knocking out the internet. Imagine 1" hail coming down while you are mobile.

Wouldn't it be nice to just press a couple buttons on your mobile radio and send a position report and weather report all at once?

Well, it is possible. Amateur radio operators across the country have set up a network called APRS or Automatic Packet Reporting System.

APRS supports text messaging on its nationwide 144.39 MHz frequency.

VHF radio communications are also connected directly to the internet and vice versa via internet gateway stations.

I recently had a friend of mine travelling through Ohio text message me in Northbrook from his Kenwood TM-D710A mobile radio to my computer screen which was running a program called UI-View. I sent him a message back. I instantly thought how useful this would be for storm chasers in Kansas and Oklahoma. They could simply send

"tornado" and since APRS sends a position report and time stamp with every message the report would be instantly sent with 100% correct information right away. No need to use voice and have to repeat yourself a few times.

Amateur radio operators were there when Katrina hit and many times ham radio was the only mode of communication for disaster relief services. The APRS network is just another layer of redundancy for emergency communications.

The below map may look like an ordinary Verizon or Sprint cell phone

coverage map, but it's actually a map of APRS coverage. Pretty impressive, isn't it?

Even if you're in rural areas with no connection to the cell phone towers or the internet, you can relay your severe reports with pinpoint accuracy using APRS. Equipment is relatively inexpensive, too.

There are many great sites about APRS. Here are a few:

[www.aprs.org](http://www.aprs.org)

[aprs.fi](http://aprs.fi)

[findu.com](http://findu.com)

[ui-view.org](http://ui-view.org)

