



Chicagoland Skywarn

Issue 1, Volume 2

February 2010

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- The Days are Getting Longer!
- Southern Lake Michigan Ice Cover

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Welcome new members and readers! Do you have some news or would you like to write an article for our newsletter? We're looking for authors! Contact Mike at aa9vi@arrl.net We'd especially like to hear from a career meteorologist.

Reps from Lake, DuPage, and Cook Co. Skywarn Teams Meet

By Mike Swiatkowski, AA9VI

Representatives from Lake Co. Skywarn, DuPage Co. Skywarn, and the future northern Cook County Skywarn teams including Bruce Becker, N9VID; Greg Perkins, KC9GHZ; Dave Kleckner, KC9GZB; George Geotsalitis, NB9R; Craig Dieckman, KC9HWK; and yours truly, AA9VI, met for a casual dinner in January.

The goals of the meeting

were to get to know one another and provide input for the new Northern Cook County Skywarn net on the NS9RC 442.725+ (PI 114.8) repeater.

Since Lake and DuPage counties have excellent leadership and a framework for reporting events, it was a great to hear of the lessons learned from both teams. They spoke about net activation, restricted net modes, net control station scripts, gaining sponsorship from an EMA/

the NWS, and the importance of deciphering weather reports from the spotters. There was a consensus that the liaison system for weather spotting was the right procedure.

We also talked about using weather data tools such as RealEMWIN from skywatch.org.

I believe we should have more of these types of meetings with the other collar counties. We can all learn from one another!

How Much Greenhouse Gas is Caused by Humans?

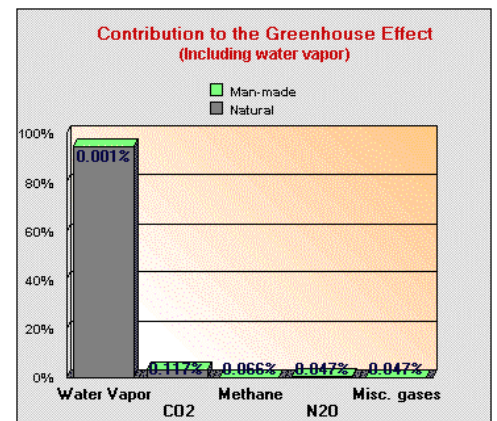
Read the entire perspective at:

http://www.geocraft.com/WVFossils/greenhouse_data.html

Just how much of the "Greenhouse Effect" is caused by human activity?

It is about **0.28%**, if **water vapor** is taken into account-- about **5.53%**, if not.

However, these emissions are so dwarfed in comparison to emissions from natural sources we can do nothing about, that even the most costly efforts to limit human emissions would have a very small-- perhaps undetectable-- effect on global climate.

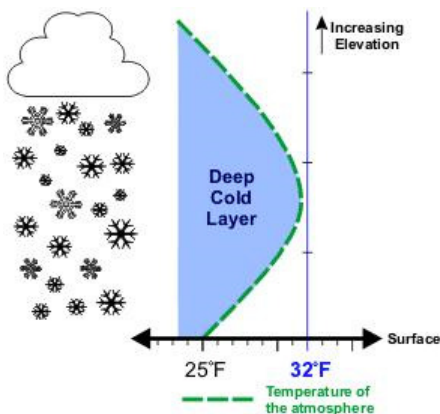


Snow, Sleet and Freezing Rain

From NWS Milwaukee website

SNOW

Formal Definition: Snow is precipitation in the form of ice crystals, mainly of intricately branched, hexagonal form and often agglomerated into snowflakes, formed directly from the freezing [deposition] of the water vapor in the air.



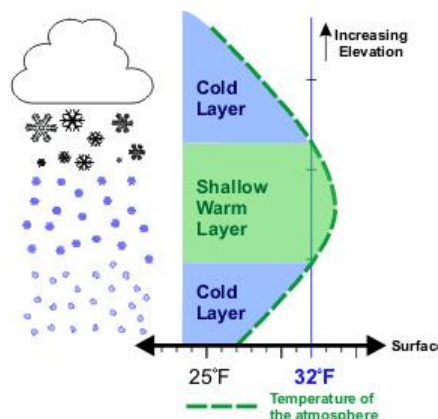
Snow begins aloft when temperatures drop below freezing. As the temperature drops, the water vapor that makes up the clouds freezes, forming ice crystals. Many of these ice crystals join together to form a snowflake and begin to fall to the ground. In order for the snowflake to remain as such until it hits the ground, it must pass through a cold (below freezing temperatures) layer all the way.

Can snow occur with surface temperatures above freezing? **YES.** Sometimes a very shallow warm layer (above freezing temperatures) will form at the surface. Since the depth of this layer is very shallow, there is not enough time for the snowflake to melt before hitting the ground, allowing for the snowflake to remain intact.

Snow grains are formed by a similar process but are usually less than 1 millimeter in diameter.

SLEET

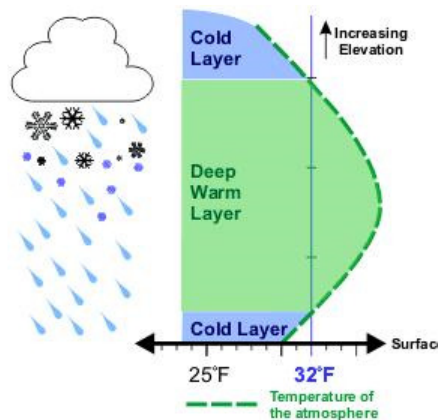
Formal Definition: Pellets of ice composed of frozen or mostly frozen raindrops or refrozen partially melted snowflakes. These pellets of ice usually bounce after hitting the ground or other hard surfaces. Heavy sleet is a relatively rare event defined as an accumulation of ice pellets covering the ground to a depth of 1/2" or more.



Sleet begins as snow aloft in the cloud layer. As the snow falls, it partially melts as it passes through a shallow warm layer. Upon entering a second layer of below freezing temperatures at the surface, it freezes once again to form the ice pellet.

FREEZING RAIN/DRIZZLE

Formal Definition: Precipitation that falls as a liquid but freezes into glaze upon contact with the ground. When the liquid particle has a diameter of less than 0.5 millimeters, the term freezing drizzle is used.



Freezing rain begins with either a rain drop or a cold layer aloft creating snow. As this droplet falls to the ground, it encounters a deep above freezing layer that allows for the droplet to either remain a rain droplet or for the snowflake to melt completely, creating rain. A shallow layer of sub freezing temperatures at the surface causes the rain droplet to freeze upon impact with the ground.

Storm Features

(Compliments of the National Weather Service and Environment Canada)

Upper-Level Features

Anvil - As the equilibrium level is reached, the air (and cloud material spreads out and the anvil is formed. If the anvil is thick, smooth-edged and puffy like the lower part of the storm, then the storm probably has a strong updraft and is a good candidate to produce severe weather. Also, if the anvil is streaming away from the storm in one particular direction, then the storm will be well ventilated by strong upper winds.

Overshooting Top - the storm has a vigorous updraft. Persistent (more than 10 minutes) overshooting tops indicate updraft strong enough to produce severe weather.

Mid-Level Features

Most of the mid-level features are associated with the storm's main updraft tower. If the clouds in the updraft tower are sharply outlined with a distinct cauliflower appearance, then the storm has a strong updraft which may produce severe weather.

Flanking Line - thunderstorms with good storm-scale organization typically have a series of smaller cloud towers to the south or southwest of the main storm tower. These smaller towers usually have a stair-step appearance as they build towards the main tower.

Striations - are streaks of cloud material that give the storm tower a "corkscrew" or Barber pole" appearance and strongly suggest rotation.

Mid-Level Cloud Band - a ring of cloud material about halfway up the updraft tower encircling the tower like ring around a planet. This is another sign of possible rotation.

As a storm grows in size and intensity, it will begin to dominate its local environment. If cumulus clouds and other storms of interest dissipate, it may be a sign that the storm is taking control of the local area.

Lower-Level Features

Rain-Free Base – is the flat, smooth cloud base beneath the main storm tower from which or no precipitation falls. The rain-free base is usually to the rear (south or southwest) of the precipitation area. This marks the area of INFLOW.

Inflow Bands - ragged bands of cumulus clouds that extend from the main storm tower to the southeast or south and suggest the gathering of low-level air from several miles away.

Tail Cloud (Beaver's Tail) - a smooth, flat cloud band that extends from the eastern edge of the rain-free base into the rain-base.

Accessory Clouds

Wall Clouds

Suggests inflow/updraft

Attached to rain-free cloud base

Maintains position with respect to rain

May contain a tail cloud that slopes upward from precipitation into storm

Shelf Clouds

Suggests downdraft/outflow

Leading edge of gust front, moving away from rain

Slopes downward away from the precipitation area

Often associated with a squall line

Funnel Clouds Vs Tail Clouds

Funnel clouds rotate, usually rapidly, extending downward from the cloud base

As opposed to scud clouds, funnel clouds typically have laminar or smooth appearance

Funnel clouds are located near the updraft, usually vertical and several orders of magnitude smaller than parent wall cloud

Tail clouds (Beaver's Tail) are often horizontal and funnel-like, but do not rotate; they should not be confused with actual funnel clouds for these reasons. Beaver's clouds extent from the updraft tower into the rain-free base.

The Clear Slot

A local region of clearing skies or reduced cloud cover, indicating an intrusion of drier air; often seen as a bright area with higher cloud bases on the west or southwest side of a wall cloud. A clear slot is believed to be a visual indication of a rear flank downdraft (RFD) and RFD may contribute to the formation of tornadoes.

Optimal Spotter Viewing Angle

Wall clouds and tornadoes are typically on the right or front side of storm with respect to their movement. This makes knowledge of storm motion important!

The safest and best viewing angle is with the storm moving to your right as you look at it (Right Hand Rule)

Viewing on the left or rear flank of the storm or with the storm moving to your left, often results in poor viewing with the line of sight obscured by rain and/or hail



Lake Co. Skywarn

www.lakecountyskywarn.org

The Days are Getting Longer

By Mike Swiatkowski, AA9VI, from timeanddate.com

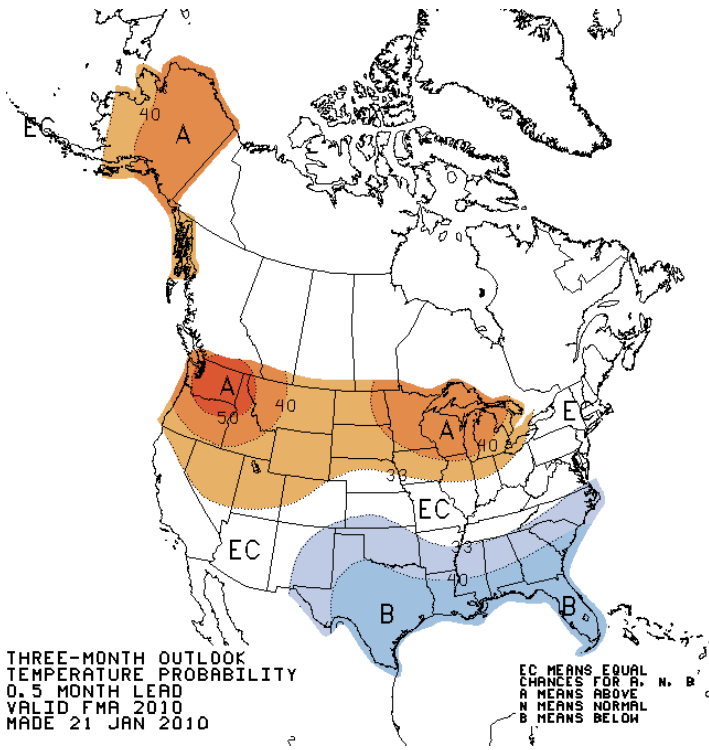
Well, if you've been feeling cabin fever or the winter blues, cheer up! The days are getting longer. Here's a comparison of day lengths for our latitude.

Date	Sunrise	Sunset	Length of day This day	Solar noon		
				Time	Altitude	Distance (10 ⁶ km)
Feb 1, 2010	7:03 AM	5:06 PM	10h 02m 46s	12:04 PM	31.2°	147.410
Feb 14, 2010	6:48 AM	5:23 PM	10h 34m 49s	12:05 PM	35.3°	147.747
Mar 1, 2010	6:26 AM	5:41 PM	11h 15m 20s	12:03 PM	40.7°	148.232
Mar 15, 2010	7:03 AM	6:57 PM	11h 54m 40s	1:00 PM	46.2°	148.783
Apr 1, 2010	6:34 AM	7:16 PM	12h 42m 37s	12:55 PM	52.9°	149.492
Apr 15, 2010	6:11 AM	7:32 PM	13h 21m 07s	12:51 PM	58.1°	150.097
May 1, 2010	5:47 AM	7:49 PM	14h 02m 11s	12:48 PM	63.4°	150.732
May 15, 2010	5:31 AM	8:04 PM	14h 33m 22s	12:47 PM	67.1°	151.232
Jun 1, 2010	5:18 AM	8:19 PM	15h 01m 11s	12:49 PM	70.3°	151.695
Jun 21, 2010	5:16 AM	8:29 PM	15h 13m 31s	12:53 PM	71.6°	152.022

The DuPage Amateur
Radio Club has a
wealth of information on
its site:
skywarn.w9dup.org

90-day Temperature and Precipitation Outlook

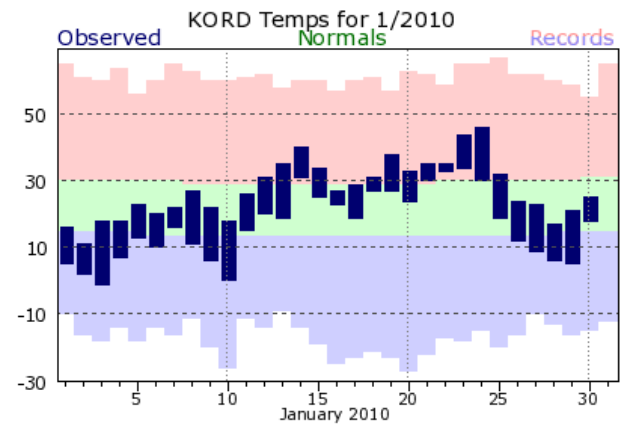
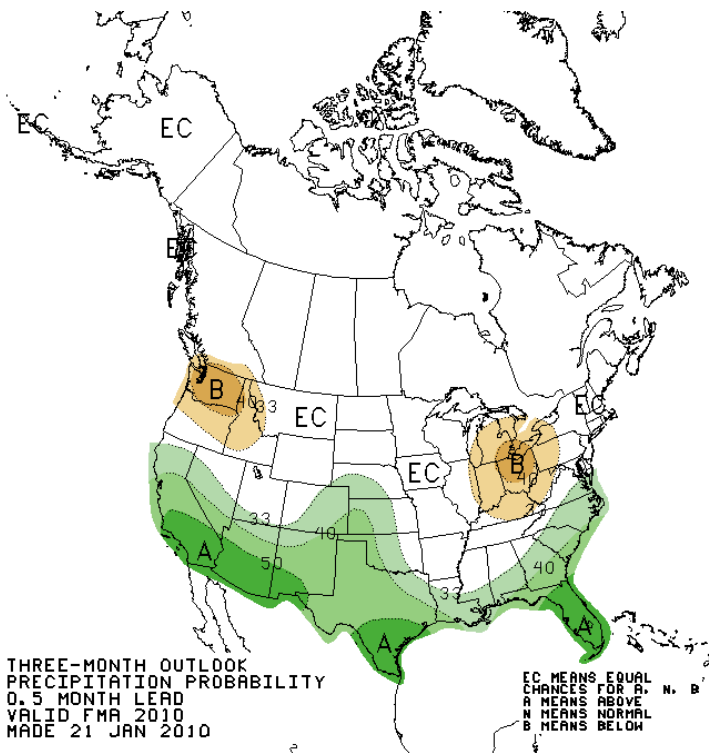
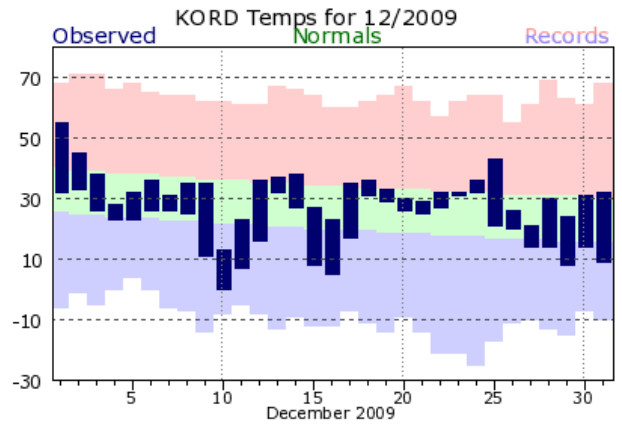
From NWS Climate Prediction Center (left maps)



Dec '09 & Jan '10 Temps

From NWS Chicago Website

These charts on the right show we were still a bit below normal during December although temperatures showed some moderation during mid-January 2010. So much for El Nino...



February and March 2010 NWS Spotter Training Schedule

February, 2010

Day	City, State	Time	Location
10	Geneva, IL (Kane County) <i>Contact Information:</i> 630-208-8911	7:00pm CST	A Building Auditorium, Kane County Government Center, 719 S. Batavia Ave
16	Ottawa, IL (LaSalle County) <i>Contact Information:</i> 815-433-5622	7:00pm CST	Meeting Room 1, Ottawa Regional Hospital, 1100 E. Norris Dr.
17	Oglesby, IL (LaSalle County) <i>Contact Information:</i> 815-433-5622	7:00pm CST	Room C-316, Illinois Valley Community College
18	Crystal Lake, IL (McHenry County) <i>Contact Information:</i> 815-338-6400	7:00pm CST	Auditorium, McHenry Community College
20	Plainfield, IL (Will County) <i>Contact Information:</i> 815-671-3844	12:00pm CST	Plainfield East High School Auditorium, 119th St & Naperville-Plainfield Road ***With Amy Freeze of Fox32, Paul Sirvatka from College of DuPage, and a look back at the 1990 Plainfield Tornado*** Noon to 400 PM
22	Kankakee, IL (Kankakee County) <i>Contact Information:</i> 815-802-7174	7:00pm CST	Auditorium, Kankakee Community College
23	Rockford, IL (Winnebago County) <i>Contact Information:</i> 815-319-6215	7:00pm CST	Public Safety Building Chicago Rockford Intl Airport
24	Naperville, IL (DuPage County) <i>Contact Information:</i> 630-420-6009	1:00pm CST	City Council Chambers, 400 S. Eagle St.
24	Naperville, IL (DuPage County) <i>Contact Information:</i> 630-420-6009	6:00pm CST	City Council Chambers, 400 S. Eagle St.
25	Dixon, IL (Lee County) <i>Contact Information:</i> 815-284-3365	7:00pm CST	Dixon Public Safety Building, 220 S Hennepin Ave

March, 2010

Day	City, State	Time	Location
02	New Lenox, IL (Will County) <i>Contact Information:</i> 815-740-8351	7:00pm CST	Lincoln Way West High School, West Campus, Auditorium, 21701 S. Gougar Road
03	Crown Point, IN (Lake County) <i>Contact Information:</i> 219-755-3549	7:00pm CST	Crown Point Civic Center, 103 E. Clark St.
05	Crestwood, IL (Cook County)	7:30pm CST	Crestwood Community Center, 14025 Kostmner

Contact Information: Hamfesters Radio 708-267-6664

06	Wheaton, IL (DuPage County)	8:30am CST	***Advanced Spotter*** \$40 registration with DuPage County OHSEM at dupagesevereweather.com Wheaton College, Todd M. Beamer Student Center, Coray Alumni Event Room
	Contact Information: 630-682-7925		
08	Lake Zurich, IL (Lake County)	7:00pm CST	Ela Library, 275 Mohawk Trail
	Contact Information: 847-377-7100		
09	Valparaiso, IL (Porter County)	7:00pm CST	Opera House, 104 Indiana Ave
	Contact Information: 219-462-8654		
10	Aurora, IL (Kane County)	7:00pm CST	City Council Chambers, 44 East Downer Place
	Contact Information: 630-801-6512		
11	Bartlett, IL (DuPage County)	7:00pm CST	Hanover Twp Senior Center, 250 S. Rt 59
	Contact Information: 630-837-0846		
13	River Grove, IL (Cook County)	9:00am CST	Triton College, Cafeteria, 2000 5th Avenue. ***Cook County Emergency Preparedness Summit and Severe Weather Seminar from 9 AM to 400 PM***
	Contact Information: 312-603-8180		
15	Lisle, IL (DuPage County)	1:00pm CDT	Krasa Center, Benedictine University, 5700 College Road
	Contact Information: 630-829-6364		
16	Yorkville, IL (Kendall County)	7:00pm CDT	Public Safety Building, 1102 Cornell - limited seating, please register in advance.
	Contact Information: 630-553-7500		
17	Aurora, IL (Kane County)	10:00am CDT	City Council Chambers, 44 East Downer Place
	Contact Information: 630-801-6512		
17	Chicago, IL (Cook County)	7:30pm CDT	Edgebrook Field House, 6100 N. Central Ave.
	Contact Information: Chicago FM Club		
18	Pontiac, IL (Livingston County)	7:00pm CDT	Public Safety Building, 413 N. Mill St.
	Contact Information: 815-844-7741		
19	Hazel Crest, IL (Cook County)	7:00pm CDT	TBA
	Contact Information: Tri-Town Radio Club		
22	Bristol, WI (Kenosha County)	6:30pm CDT	Kenosha County Center at intersection of Hwy 50 & 45, 630-830pm, (Advanced)
30	DeKalb, IL (DeKalb County)	7:00pm CDT	Room 121 Davis Hall, Northern Illinois University
	Contact Information: 815-753-5492		
31	Sandwich, IL (DeKalb County)	7:00pm CDT	Community Room, Sandwich Opera House, 144 E. Railroad Ave.
	Contact Information: 815-786-2261		

Chicagoland Skywarn

INQUIRIES/SUGGESTIONS
aa9vi@arrl.net

Join our Private Yahoo list
(requires free membership)

Sign up at:

<http://aa9vi.com/wx>

Skywarn Reporting Repeaters

- Blue Island: 146.64- PL 107.2
- Chicago: 442.725+ PL 114.8
- Downers Grove:
145.43- PL 107.2
- Frankfort: 444.55+ PL 114.8
- Gilberts: 146.925- PL 100.0
- Grant Park: 441.3+ PL 114.8
- Homewood: 442.375+ PL 114.8
- Kankakee: 146.94- PL 107.2
- Libertyville: 147.18+ PL 127.3
- Woodstock: 146.835- PL 91.5
- Malta: 146.73- PL 100.0
- Marseilles: 146.745- PL 114.8
- Merillville: 146.7- PL 82.5
- Morris: 147.27+ PL 107.2
- Rockford: 147.255 PL 114.8
- St. Charles: 145.47 PL 103.5
- Valparaiso: 147.105+ PL 131.8
- Yorkville: 147.375+ PL 103.5

S.E. Wisconsin Skywarn
145.13- MHz PL 127.3 Hz

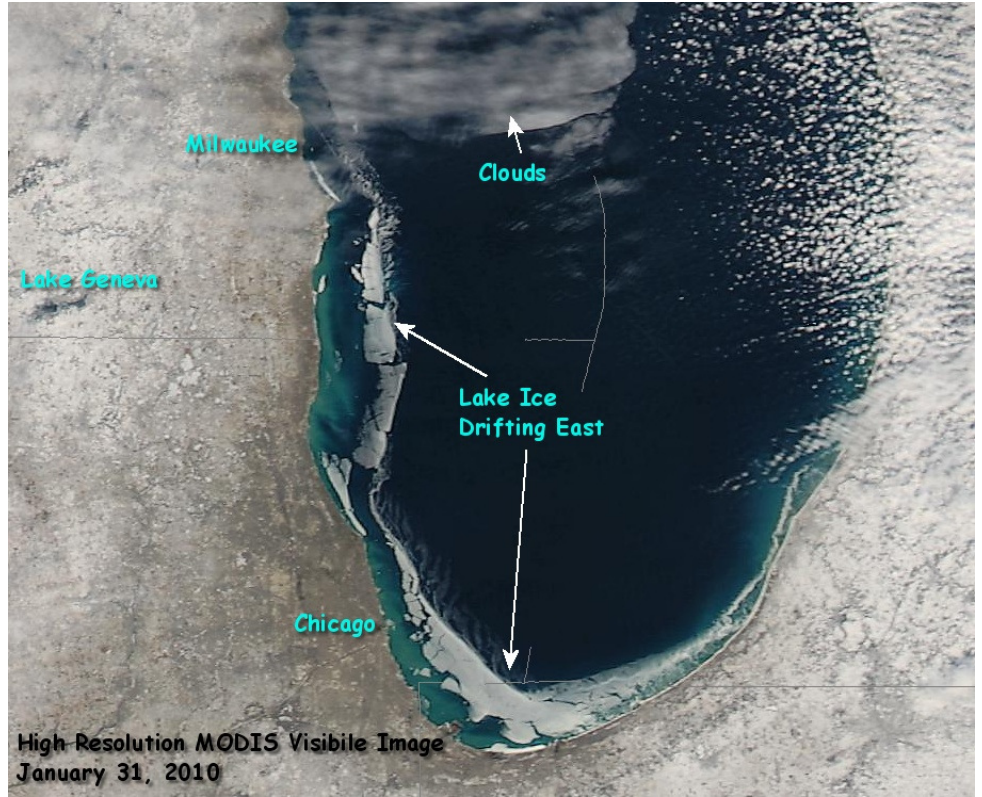
APRS Packet WX: 144.39 MHz
Winlink Packet: 145.61 MHz

NWS Chicago Website:
weather.gov/chicago

Lake Michigan Ice

From NWS Milwaukee website

Where's the ice as of January 31st? Here's a nice shot!

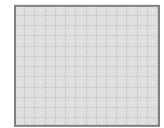


And Finally...one more time...

What's new in your group? Do you have any announcements related to Skywarn, or EMCOMM related activities? Please let us know. We'd be happy to publicize it!

CHICAGOLAND SKYWARN

**A BRIDGE BETWEEN METRO
CHICAGO SKYWARN
AGENCIES**



**MEMBER'S NAME
STREET ADDRESS
CITY, ST 60600**