



# Significant Weather Observation Program



**NWS Lincoln, IL**  
**Fall 2007 Meeting**  
**Matt Barnes**  
**Chuck Schaffer**

# Meeting Outline

- About the SWOP program
- 2007 Weather in Review
- Severe Weather Reporting
- Winter Weather Training
- Questions

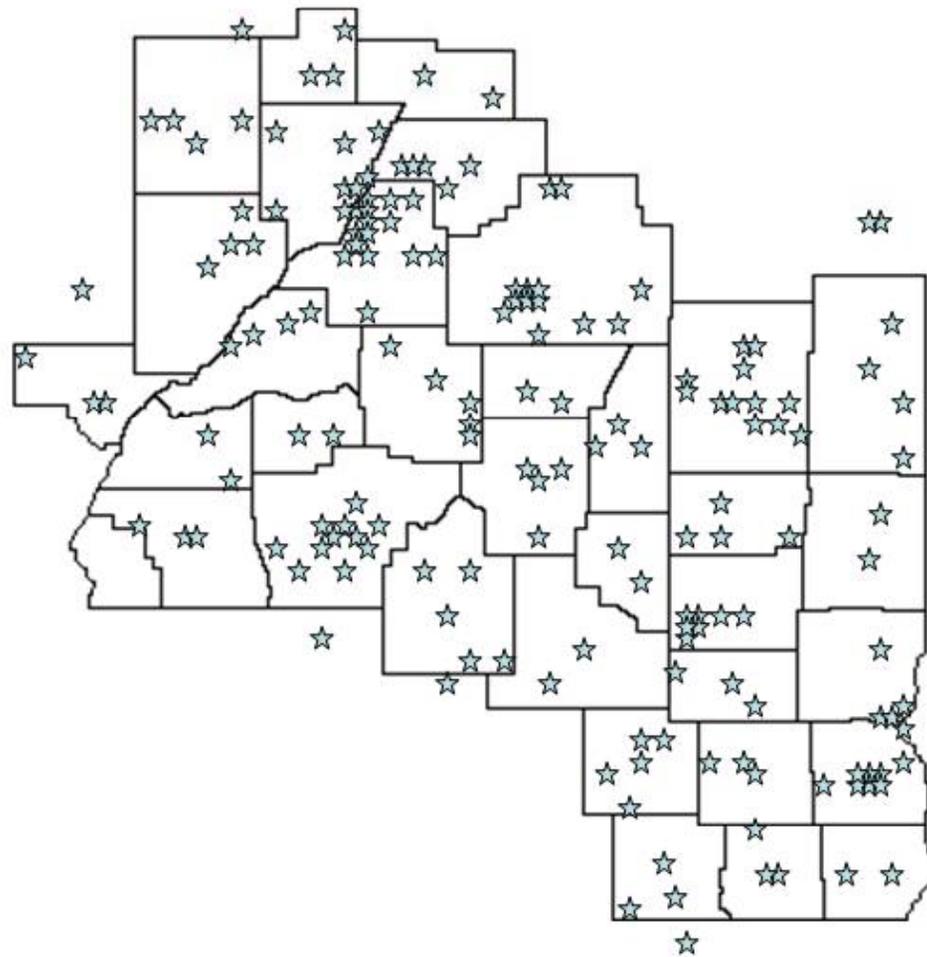
# About SWOP

- Unique to NWS Lincoln
- Created to provide forecast staff with real-time weather data during significant events
- Expanded to include day-to-day weather
- Currently over **180** members

# SWOP Features

- E-mail notification letting you know of impending significant weather  
(usually at least 24 hours heads-up)
- Weekly Weather Discussion
- SWOP Rainfall/Snowfall maps placed online
- Significant Weather Event summaries
- Annual meetings and other events

# Current SWOP Network



# Recruitment Update

- **Poster Campaign**
  - aimed primarily at southeast counties
  - SWOP posters placed in libraries
  - resulted in around a dozen new members
- **Webpage Advertisement**
  - focused on areas west of Illinois River
  - netted 14 new observers
- **Public Open House**
  - SWOP brochure
  - 5 new members

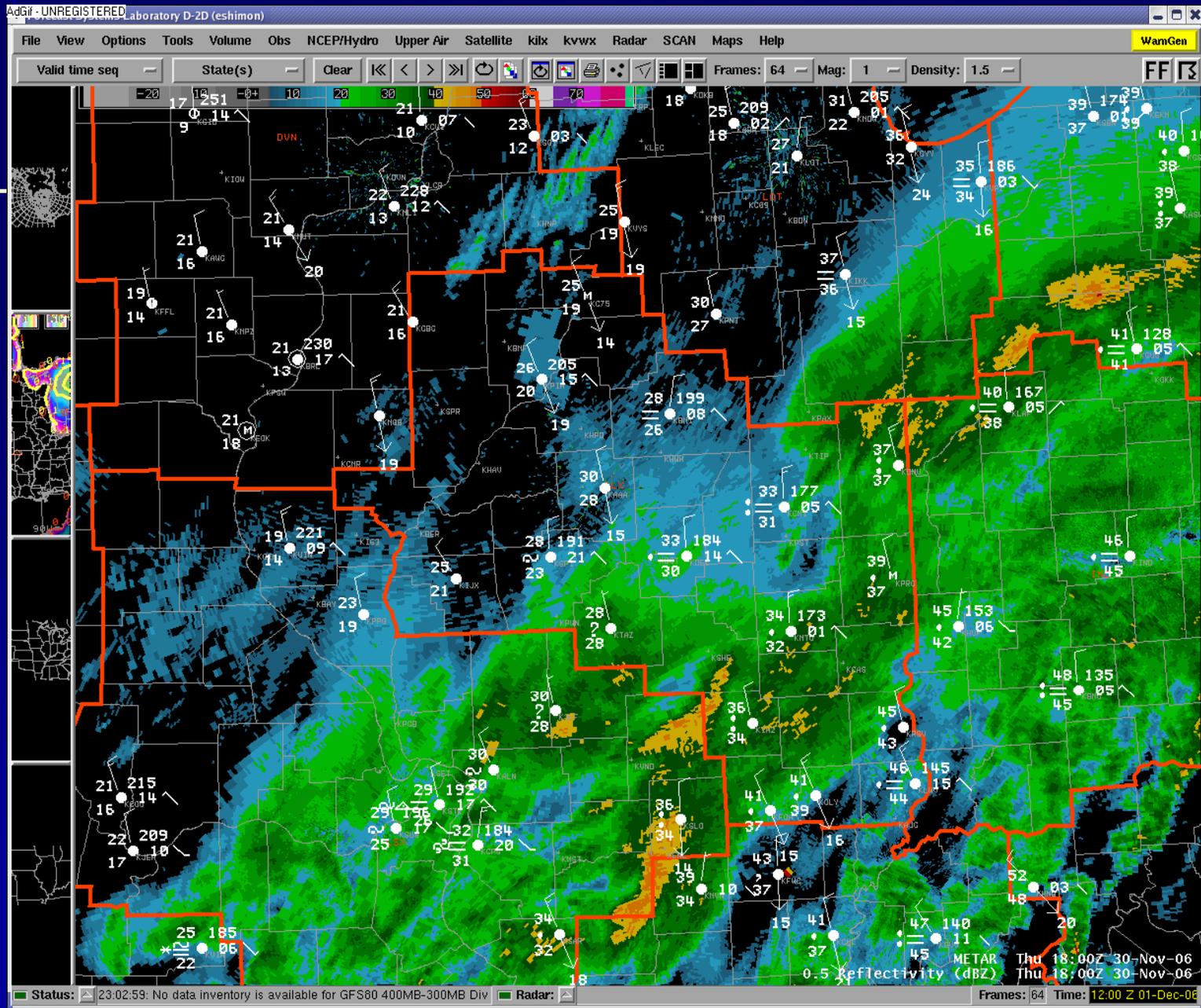
# 2006-2007 Winter Weather Season

- 2 significant events:
  - Snow/ice storm Nov 30/Dec 1
  - Blizzard Feb 13

# Nov 30/Dec 1 overview

- Widespread freezing rain moved into west central and central Illinois during the morning of Nov 30. The freezing rain mixed with and changed to heavy sleet, which persisted for 6 to 8 hours during the evening of Nov 30. Eleven counties in central Illinois reported ice thickness ranging from 0.25 to 0.70 inches. Eight counties in central Illinois reported heavy sleet accumulations ranging from 0.50 to 2.20 inches deep.
- Snow began in west central Illinois around 7 PM Nov 30 and spread into central Illinois by 3 AM Dec 1. The snow ended in west central Illinois around 10 AM Dec 1, and in central Illinois by 1 PM. Total snow accumulations were heaviest along and west of the Illinois River valley, and ranged from 8 to 15 inches, including 8 to 10 inches in the city of Peoria. Other locations in central Illinois reported 3 to 8 inches of snow on top of the significant ice and sleet accumulations.

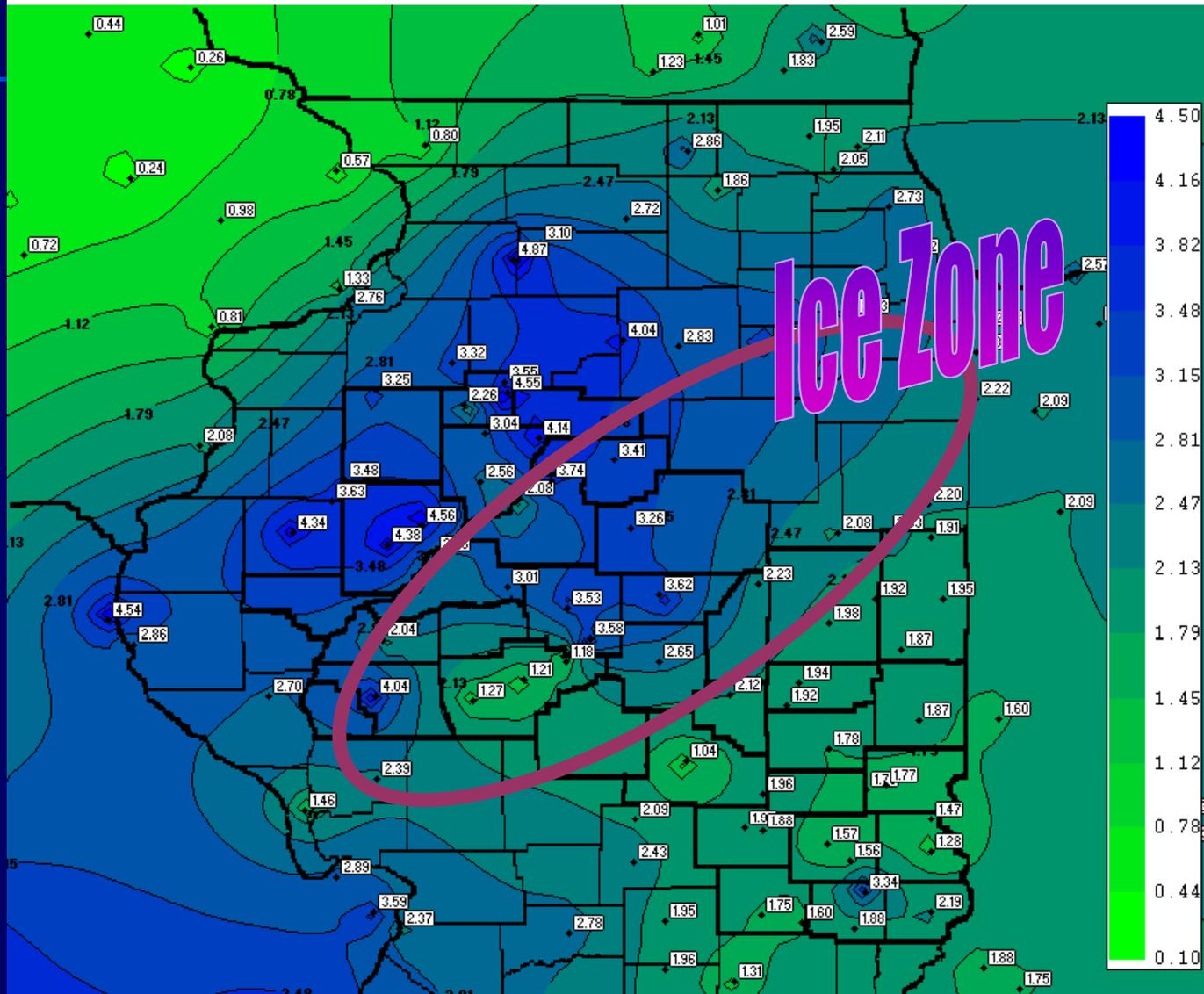
# Radar Loop – Nov 30/Dec 1



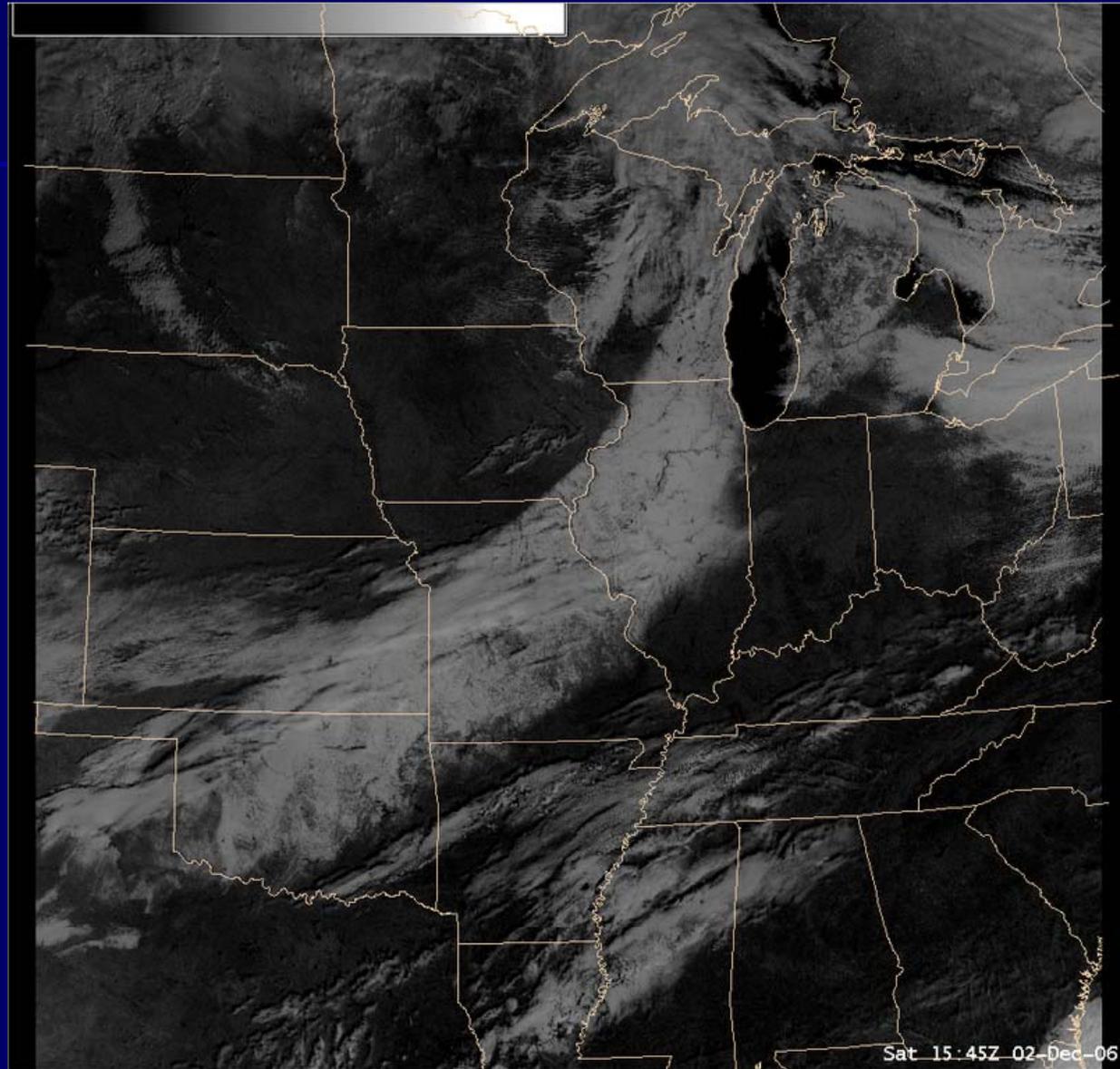


# 3 Day accumulated precip

PRELIMINARY ILLINOIS 3-DAY COOPERATIVE OBSERVER PRECIPITATION  
ENDING AT 7 AM CST FRI DEC 01 2006



# Visible Satellite – Dec 2



# Storm impacts

- Numerous tree limbs and power lines downed due to icing and heavy snow. About 100,000 utility customers were without power in central Illinois, including 35,000 in Decatur, 10,000 in Bloomington/Normal, 7,000 in Springfield and 5,000 in Lincoln. Power was out for several days in many communities, during unseasonably cold temperatures.
- Snow and ice covered roads resulted in multiple auto accidents, including several which resulted in closures of I-55, I-155 and I-74.
- 2 people injured and taken to local hospital when the roof of a nursing home in Peoria collapsed due to the weight of snow and ice.

# Images from Lincoln

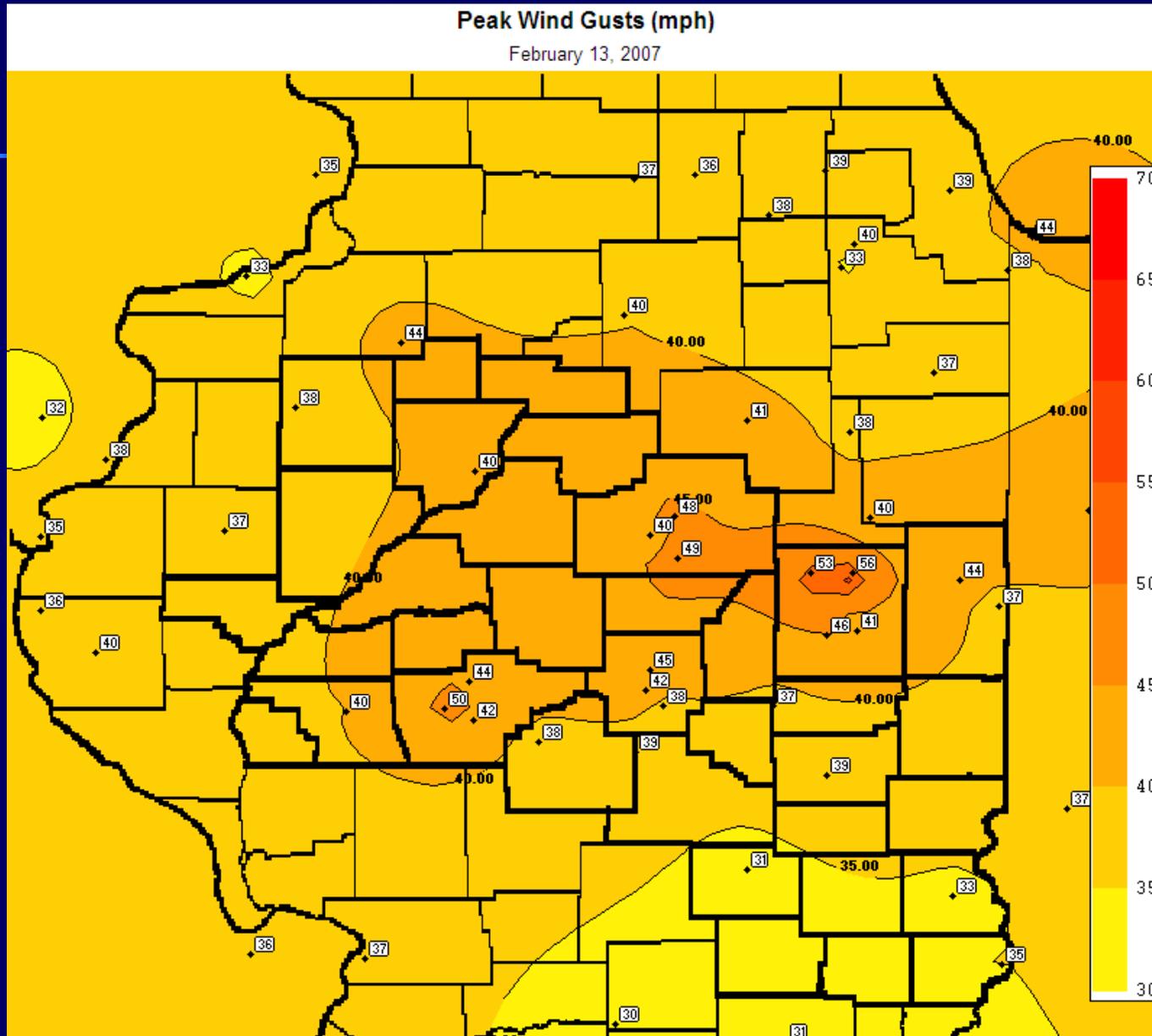


# February 13 overview

- Blizzard conditions overspread most of central Illinois early Tuesday, Feb 13 and persisted through the day.
- Maximum snowfall reported was 17" located 5 NW of Sidell, with 14" in Arcola. Eastern Champaign county reported 13.7" with 11-15" in the Springfield area. The official Springfield observation of 11.2" was the 4th highest 24 hour total on record. Bloomington reported 12.5". The heavy snow band was centered on a 50 mile wide band from Winchester, to Springfield, to Danville.
- Wind gusts with the blizzard conditions reached a maximum during the afternoon, with gusts of 50 mph in Springfield, 56 mph in Champaign county, and 40 to 50 mph across the remaining sections of central and eastern Illinois from Peoria to Decatur.



# February 13 Wind Gusts



# Storm impacts

- Numerous power outages were reported due to the high winds.
- Many interstates were closed during the height of the storm, with snow plow crews pulled off the roads. Rural roads impassable.
- Most schools, major businesses, and airports closed, including: ISU, U of I, State Farm (Bloomington).
- **2** deaths reported during snow removal.

# 2007 Severe Weather Season

- Unusually Quiet
- Only **6** tornadoes in the Lincoln NWS area so far in 2007 as compared to **72** last year!
- Few widespread severe events...mostly isolated in nature
- Why so little severe weather?
  - main storm track further north than usual
  - drought conditions

# 2007 Severe Events

- **March 1**: tornado near Elwin
- **Aug 23**: Derecho across Knox, Stark, Marshall counties
- **Oct 18**: damaging winds and hail in eastern IL

# March 1

- Strong cold front triggered a line of thunderstorms along and east of I-55
- Mainly a wind event...with Taylorville and Decatur particularly hard hit
- Brief tornado touched down in Elwin in Macon County
- One injury with tornado

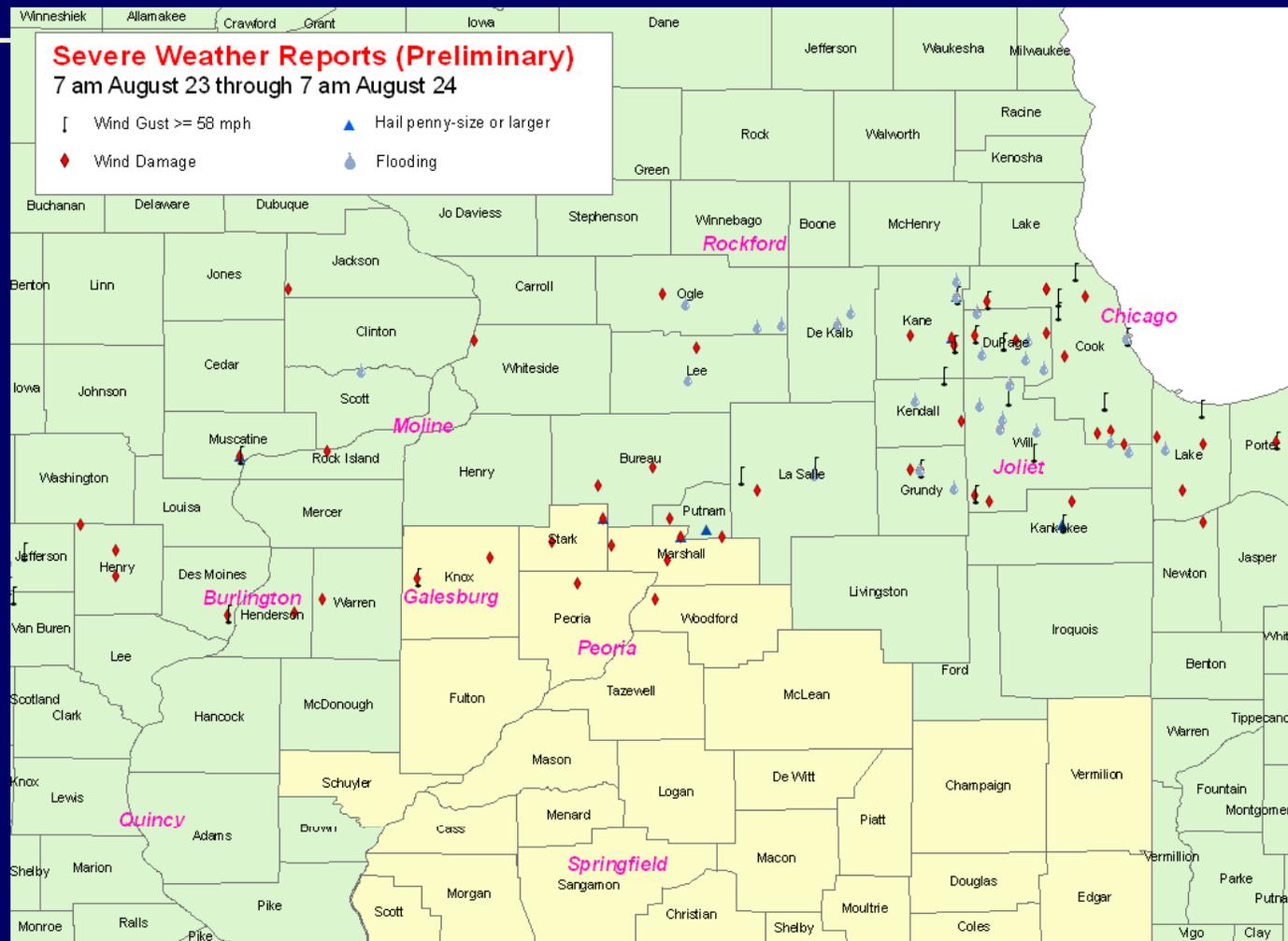
# March 1



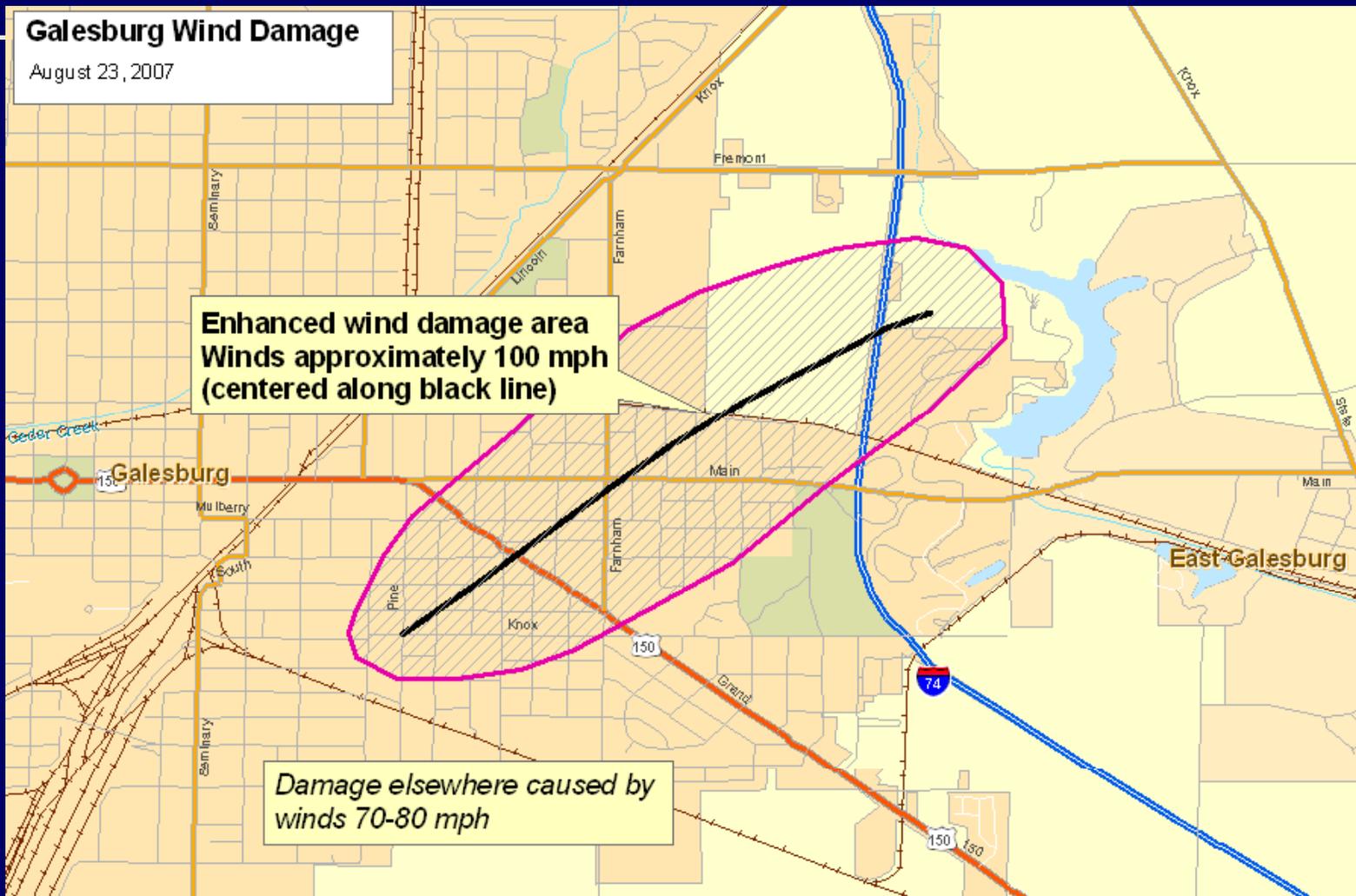
# August 23

- Slow moving front triggered a cluster of long-lived thunderstorms (also known as a derecho) across northwest Illinois
- The storms continued northeast and severely impacted the Chicago area around rush-hour
- Winds from 60 to 100mph across parts of Knox, Stark, and Marshall counties
- Numerous reports of significant wind damage

# August 23



# August 23



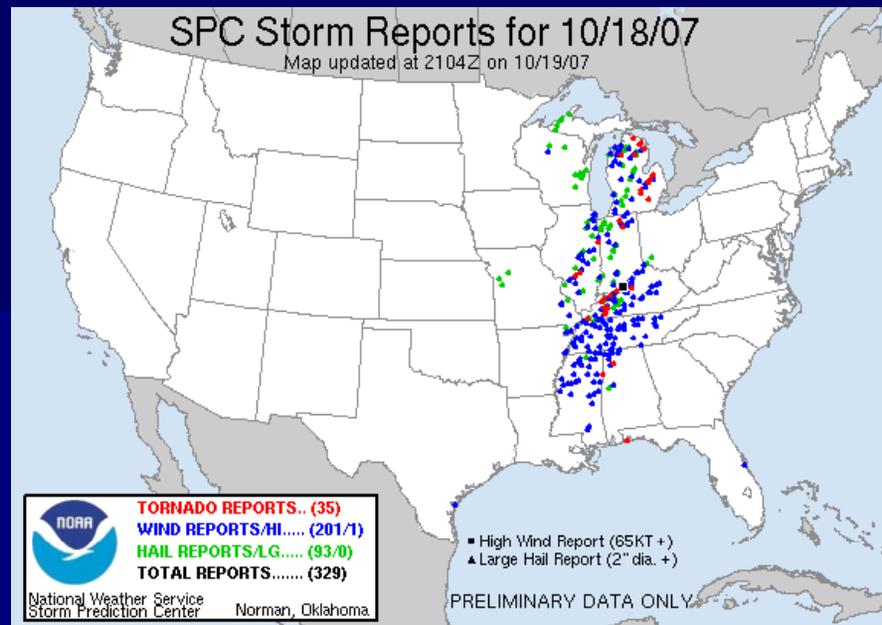


# October 18

- Intense low pressure system moved through Midwest
- IL received severe storms along warm front early morning and cold front late afternoon
- Numerous reports of wind damage to trees and power lines with 60-75 mph winds along/east of I-57 corridor
- Up to 1.75" hail

# October 18

© Paul M. Hadfield



# Other 2007 Storms



**Paul Hadfield**  
Forsyth  
August 8, 2007

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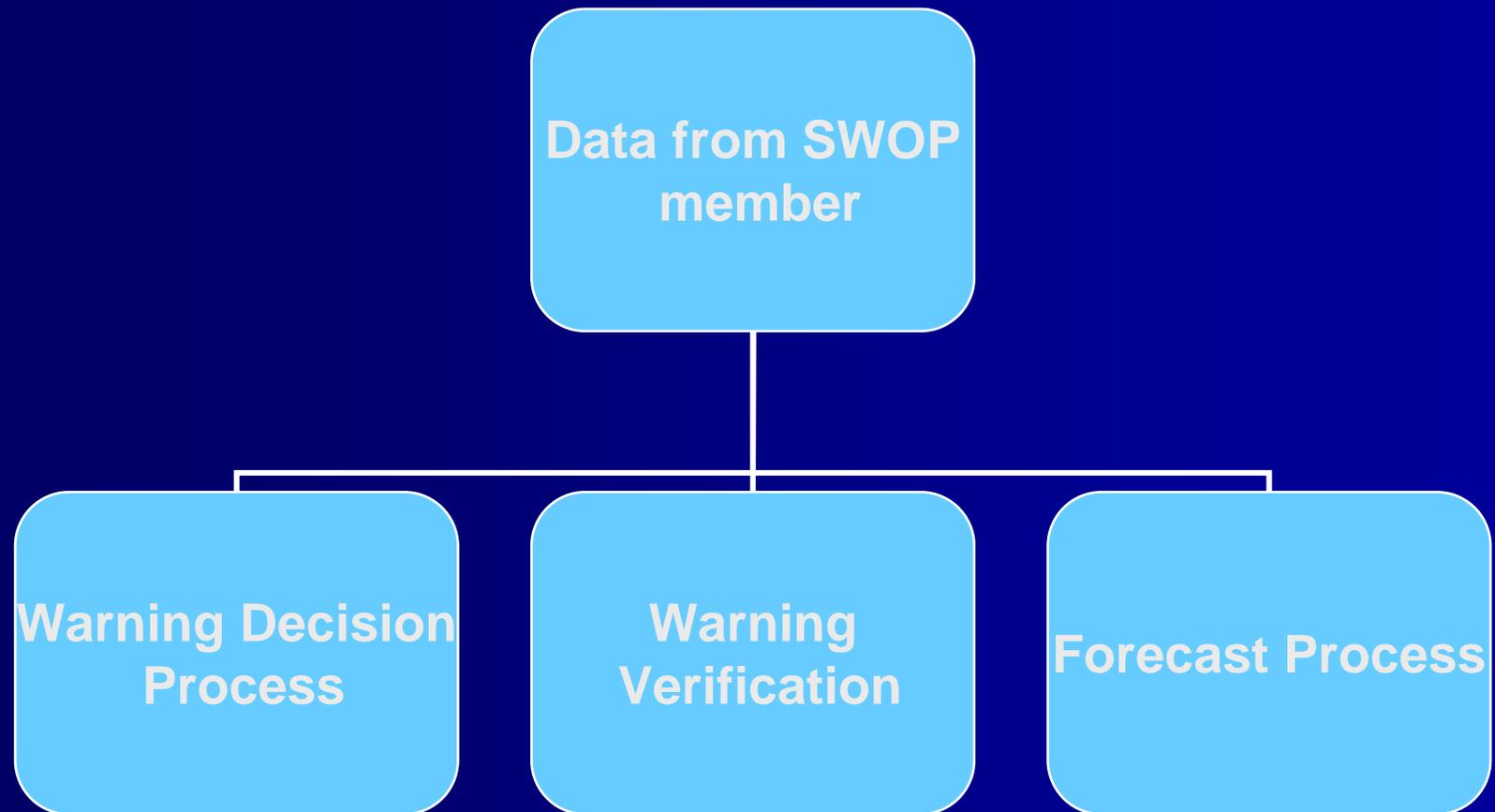


**Paul Hadfield**  
Forsyth  
August 14, 2007

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# Value of SWOP Reports



# Severe Weather Reporting

- **ANY Storm Damage:** downed tree branches, structural damage
- **Hail Size:** report size of largest stones, compare to coin
- **Wind Speed:** estimate peak gusts
- **Flooding:** water flowing across roads
- Be as specific as possible and always include exact **LOCATIONS** and **TIMES**

# Other Weather Reporting

- **Rainfall totals: daily and/or event**
- **Snowfall/Snow Depth**
- **Extreme temperatures**
- **Other: Feel free to let us know what's happening at your location!**

# How to Send Reports

- eSpotter is the preferred method, as reports sent this way are received by NWS staff **immediately**
- <http://www.espotter.crh.noaa.gov/>
- SWOP e-mail account can also be used, although response may be slower. Please include LOCATION when using e-mail.
- [nwslilx@noaa.gov](mailto:nwslilx@noaa.gov)

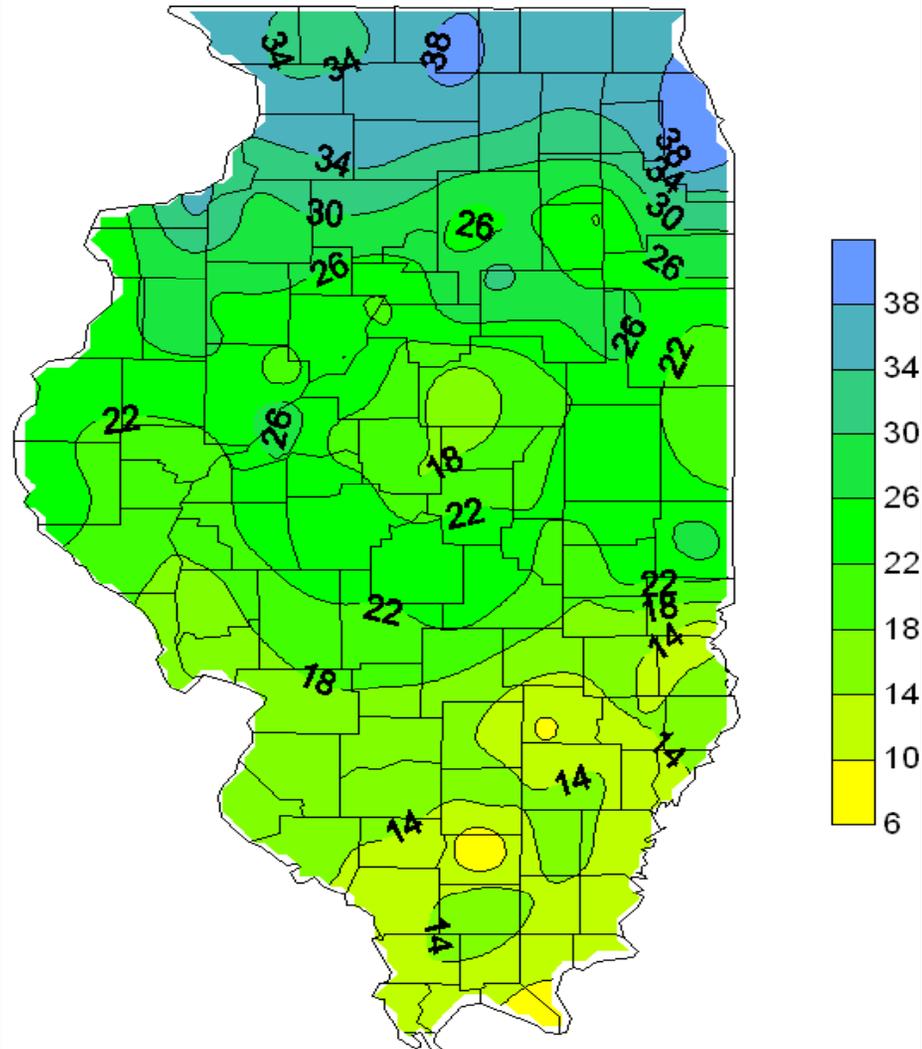
# Winter Weather Reporting



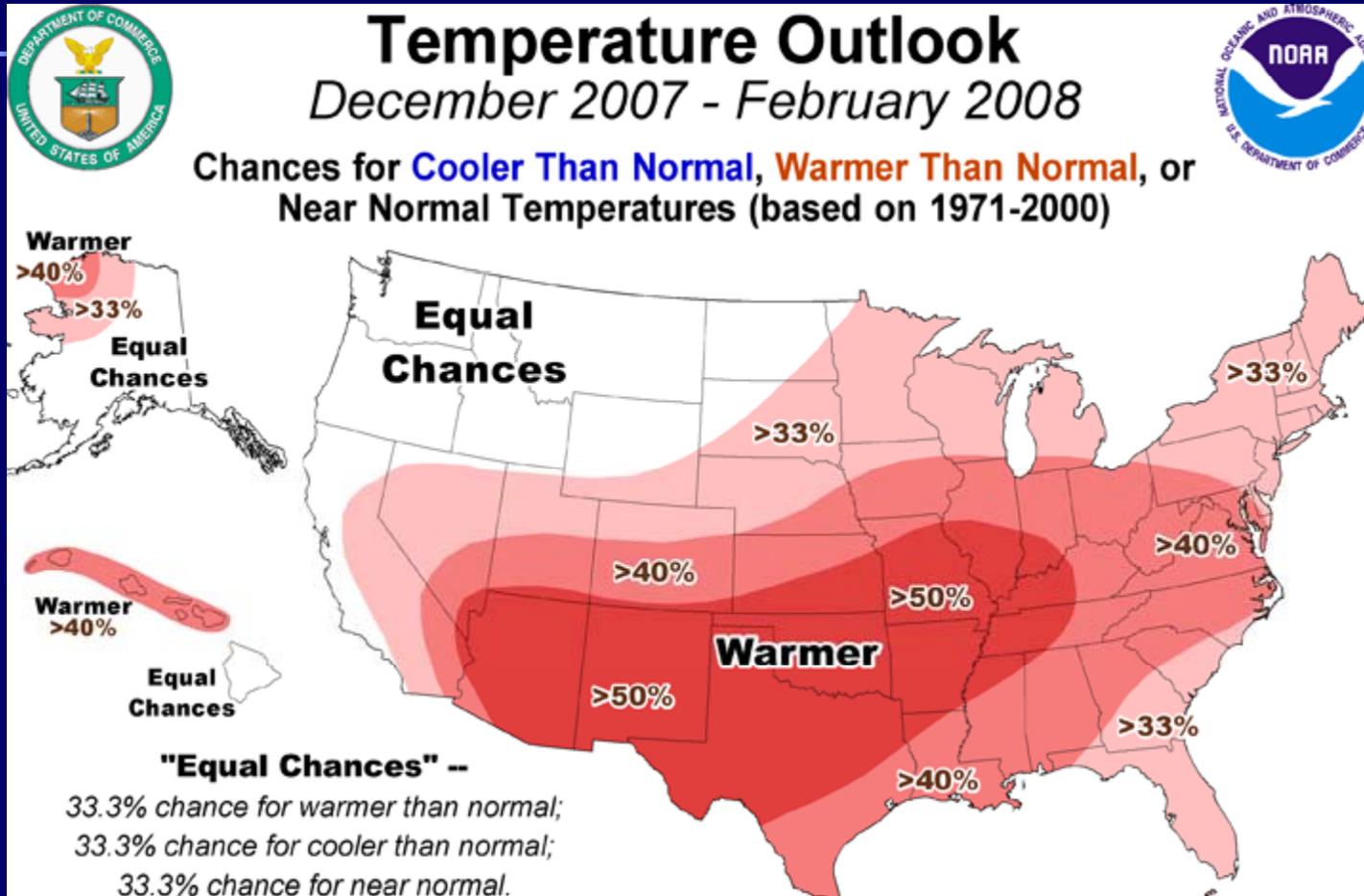
Markes Rodgers  
Rosamond  
Christian County  
March 21, 2006

# Average Annual Snowfall

1971-2000 Normal Annual Snowfall (in)



# 2007-2008 Winter Outlook

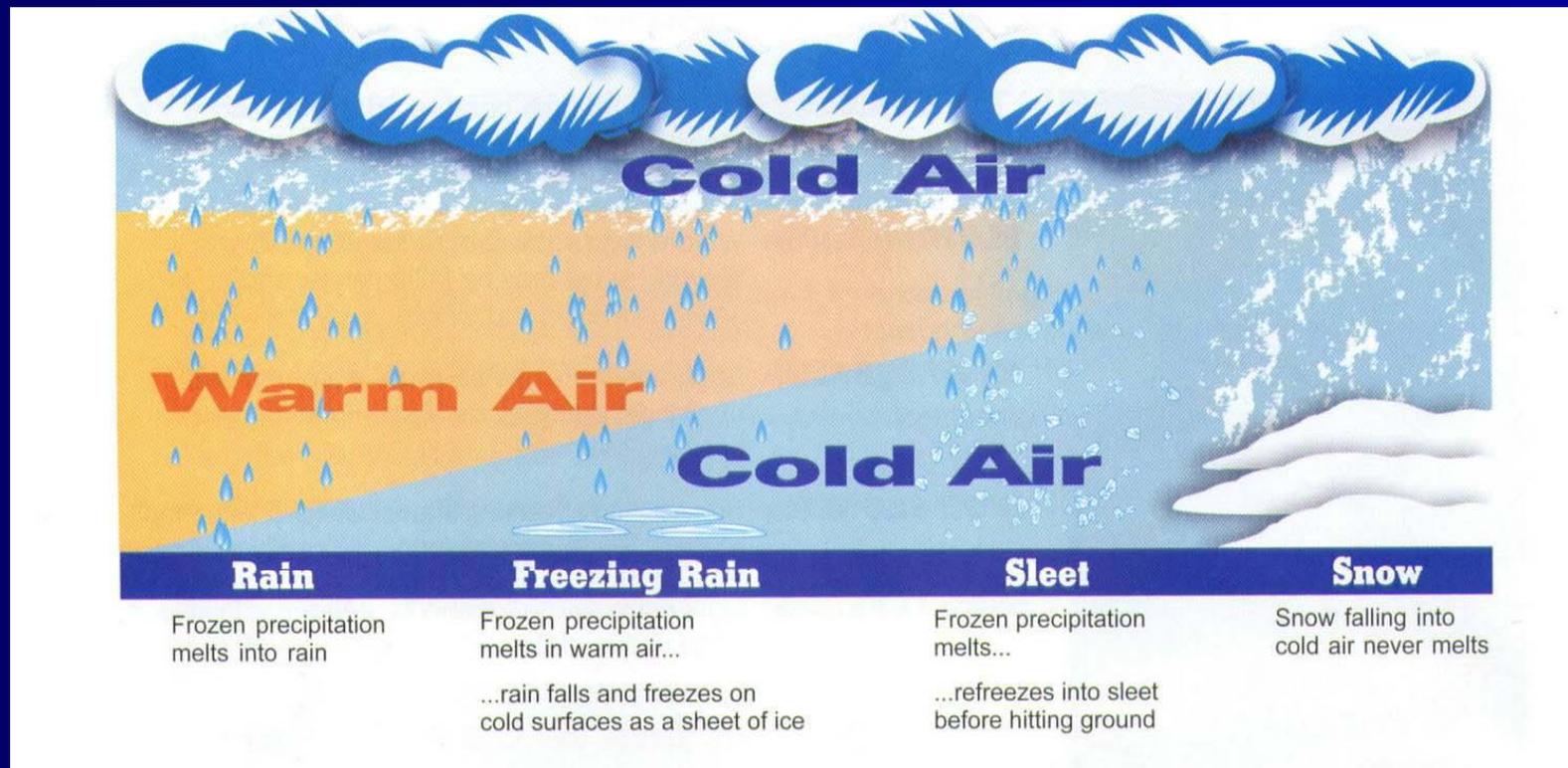




# What to report?

- **Time of Precipitation Onset:** this can help us assess our current accumulation forecasts
- **Type** (are you getting rain, snow, sleet, freezing rain, or a mixture?)
- **Snowfall measurements** (both during and after the event)

# Precipitation Type



# Winter Weather Reporting

- **Snowfall** is the amount of NEW snow that has occurred since your last measurement
- **Snow Depth** is the total amount of snow on the ground (both old and new)
- Both can be measured with an official NWS snowstick...or a basic yardstick

# How to Measure Snow

- Select a flat, grassy location well away from obstructions (drifting effect)
- Do **NOT** take measurements on concrete or asphalt surfaces (melting effect)
- Do **NOT** include snow drifts for snowfall
- Take an average of at least **5** readings and use this as your official total

# Winter Weather Websites

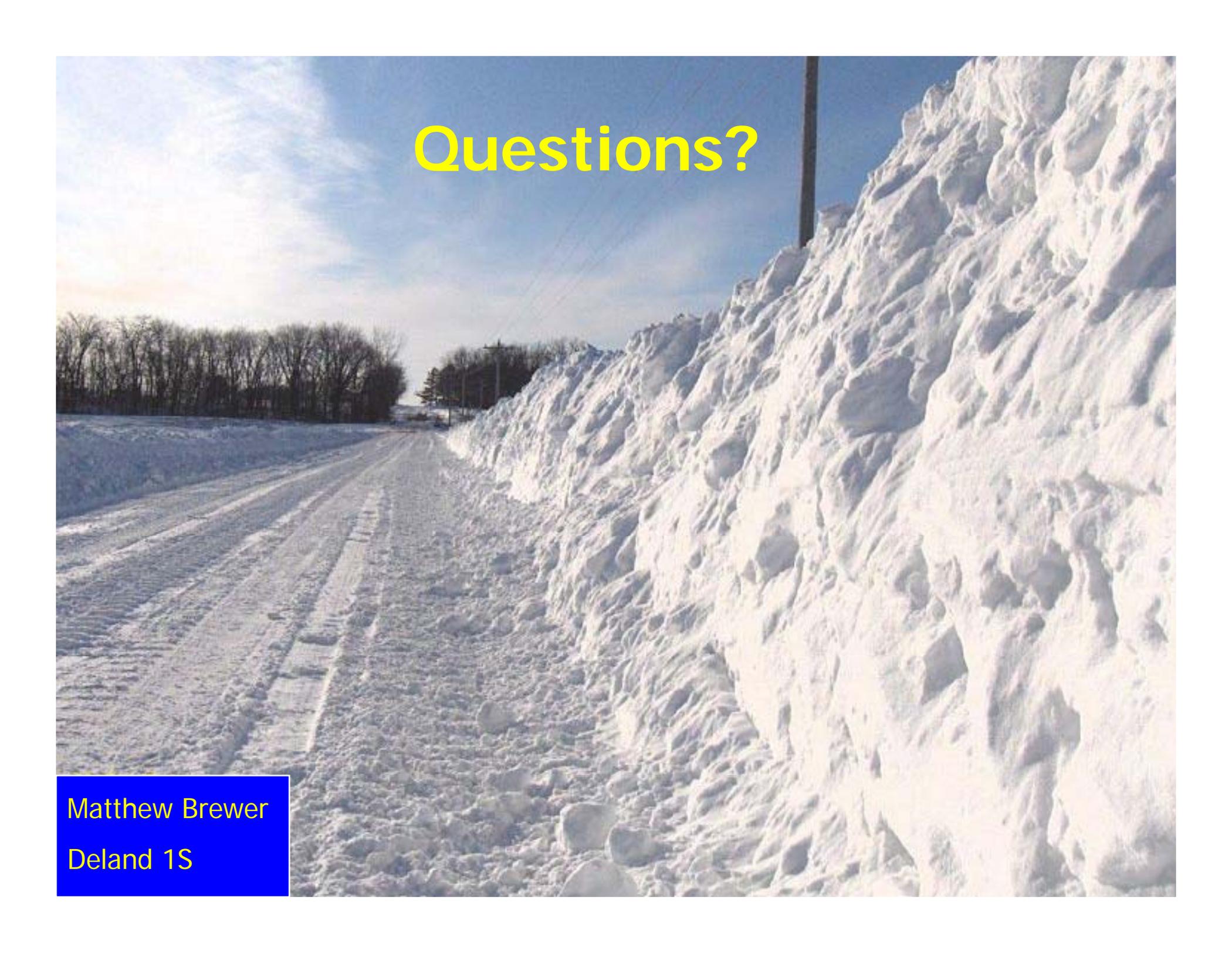
- **Long-range outlooks:**  
<http://www.cpc.noaa.gov/products/forecasts/>
- **Probabilistic forecasts:**  
[http://www.hpc.ncep.noaa.gov/wwd/winter\\_wx.shtml](http://www.hpc.ncep.noaa.gov/wwd/winter_wx.shtml)
- **El-Nino/La Nina information:**  
<http://www.cpc.noaa.gov/products/precip/CWlink/MJO/enso.shtml>
- **Winter Weather Safety and Awareness:**  
<http://www.nws.noaa.gov/om/winter/>
- **Winter Storms in Illinois (State Climatologist):**  
<http://www.sws.uiuc.edu/atmos/statecli/Winter/winter.htm>

# More Notes About SWOP

- We do **NOT** expect you to “chase” severe weather
- We do **NOT** expect you to risk injury or death to get reports to us
- **SAFETY FIRST!**

# More Notes About SWOP

- If you are a **trained spotter**:  
Follow your local county or city reporting guidelines **FIRST**. Then if you choose, you can pass the info onto us later.
- If you cannot contact your local agency, or only have precipitation/non severe weather to report, then contact us.



# Questions?

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