

# National Weather Service StormReady Supporter Program

Helping to Prepare Your Organization  
for Severe Weather



Andy Boxell  
National Weather Service  
Chicago, IL



# Outline

- What is StormReady?
- Why become a StormReady Supporter?
- How to get there!
- Success Stories

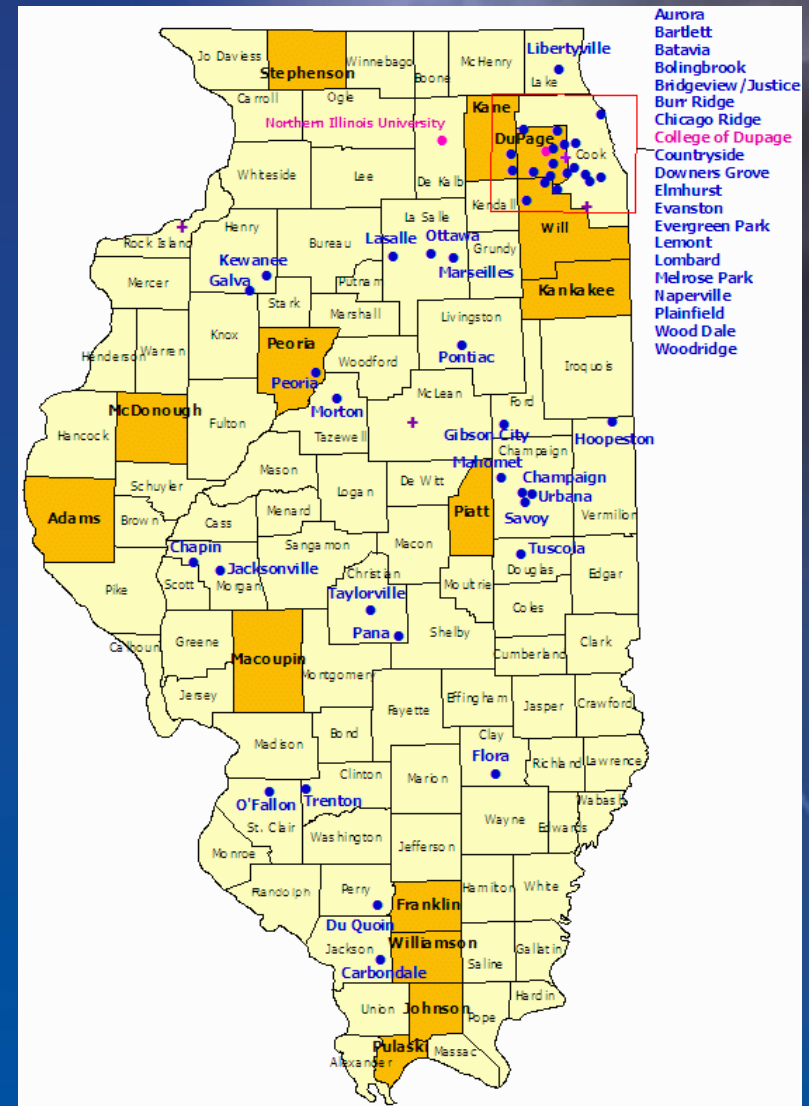


# What is StormReady?

- Developed in 1998 to aid both government and non-government partners and customers in preparing for severe weather
- Provides these entities with guidelines to implement procedures to reduce the potential for weather-related disasters
  - River and flash floods
  - Tropical systems
  - Severe convective storms
- For the Chicago area, the primary threat is often from severe thunderstorms
  - Large hail
  - Damaging straight-line winds
  - Tornadoes

# What is StormReady?

- First community was certified in 1999, now over 1500 StormReady entities across the country
  - Towns, counties, universities
  - 110 corporate and non-government “StormReady Supporters”
  - Only 4 in Illinois; 2 in the Chicago area!



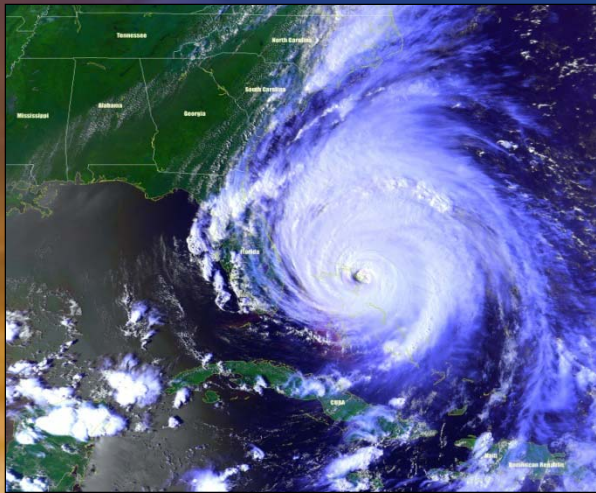
# What is StormReady?

- Organized under 6 guideline headers
  - Communications
  - Warning Reception
  - Hydrometeorological Monitoring
  - Warning Dissemination
  - Facility Preparedness
  - Administrative



# Why do we need StormReady?

- Approximately 90% of all Presidentially declared disasters are weather related
- More than 500 Americans die each year in weather and flood-related events
- More than 5,000 are injured
- Severe weather causes nearly *\$14 Billion* in property damage each year

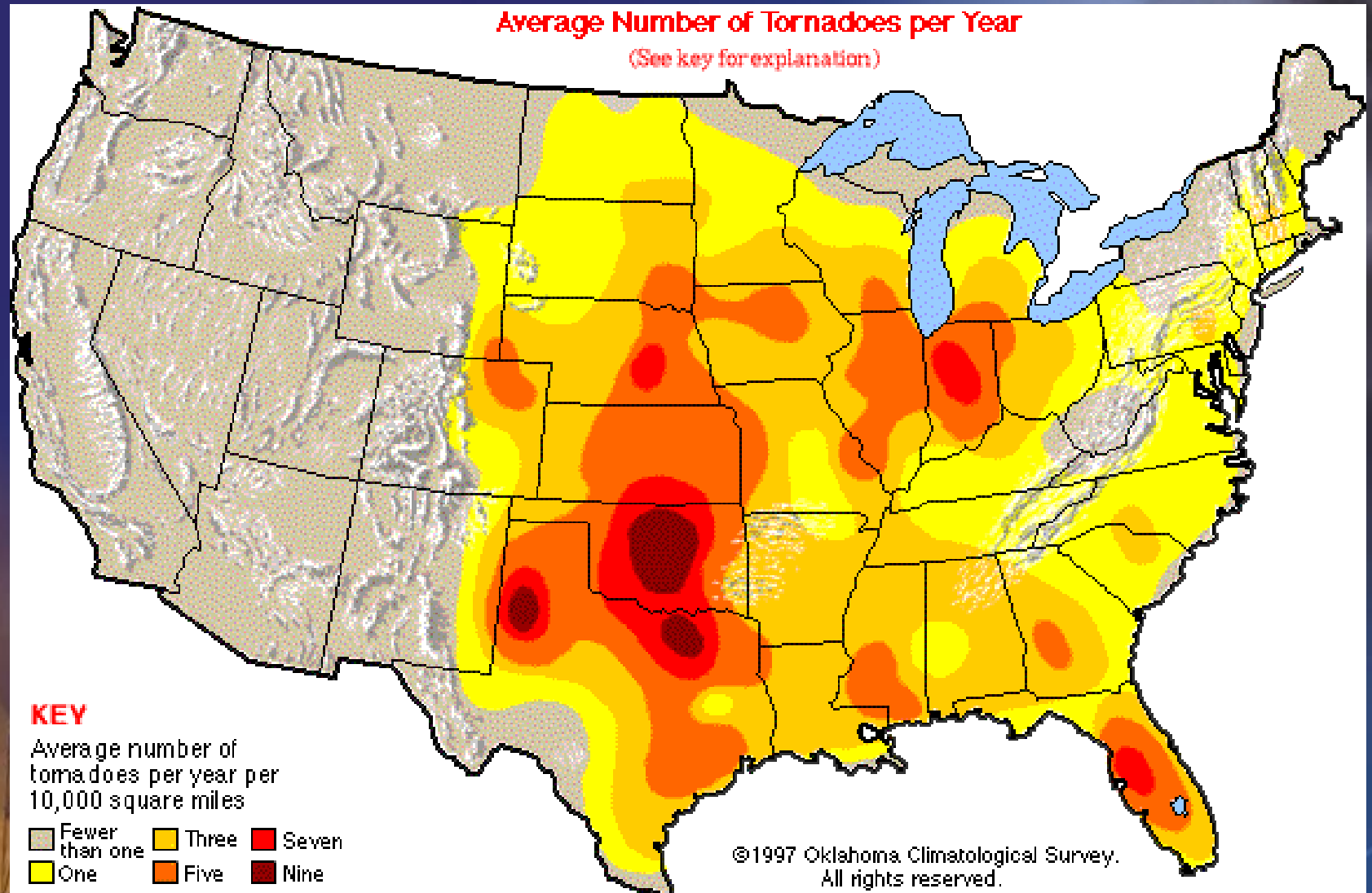


# Why StormReady?

- The United States sees on average between 1100-1300 tornadoes in any single year
  - Illinois is 5th in the number of tornadoes per 10,000 sq. miles\*
    - More than Texas, Nebraska, and Colorado
  - 8th in the number of strong (EF2) to violent (EF5) tornadoes\*
- The Midwest experiences a number of nighttime and “out of season” tornadoes
  - Evansville and Newburgh, IN, November 2005
  - Boone County, IL, January 2008

## Average Number of Tornadoes per Year

(See key for explanation)



Number of tornadoes per 10,000 sq. miles. Note the maximum over central and northern Illinois and Indiana.

# Greensburg, KS

## May 5, 2007

- EF-5 tornado, winds >250 mph
- 1.7 miles wide
- Struck during evening
  - Citizens had warning, only 12 lives lost



# Greensburg, KS

Before...



After...



# This doesn't just happen in Kansas...

- November 6<sup>th</sup>, 2005
  - Evansville, Newburgh, IN
  - F-3 tornado
  - 1:48 am
  - 40 miles in 40 minutes
  - Out of season, middle of the night
  - Warnings were issued, but no one got them!
  - 25 lives lost
  - \$92 million in damage



# Evansville/Newburgh, IN

- The time of year and time of day meant people weren't prepared
- A plan that included NOAA Weather Radio would have saved lives!
- This could happen anywhere *unless* the community is prepared!



# Is a Plan in Place?

- Severe thunderstorms expected in the area near kickoff
- Bow Echo in southwestern Wisconsin moving toward the area
- High risk of severe weather, including significant tornadoes, with thousands expected in Grant Park by evening
- Do you know what to do?
- Do your employees, patrons, and customers know what to do?

# So What *Do We Do*?

- While each situation is different, StormReady provides the guidelines to create a plan **BEFORE** severe weather hits
- Organization management, safety services, and weather experts must work together to develop plans based on the 6 StormReady guideline headers, beginning with emergency communication, which forms the backbone of any good response plan

# Guideline 1-Emergency Communication Center

- StormReady Supporters are required to have a dedicated warning point that is staffed whenever the building or organization is staffed and operating
  - Warning Point must be able to receive National Weather Service (NWS) watch and warning products
  - Must have the ability and authority to activate emergency warning systems
  - Communications to and from Warning Point are critical to StormReady success

# Warning Point

- Common choices are security or safety offices
- The purpose of the Warning Point is to maintain a constant “weather watch”
  - Should be able to receive a warning and act on it
  - Able to pass on storm reports to local NWS office

# Guideline 2-Warning Reception

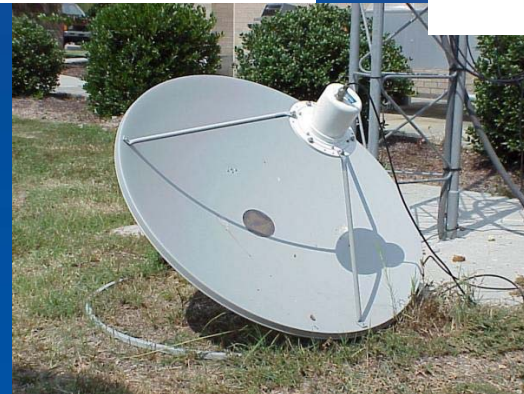
- Need warning reception at Warning Point and around organization building(s)
- One of the two required methods must include NOAA Weather Radio
  - Single best way to receive watch and warning information ***directly*** from the National Weather Service
- Weather Radios should be treated with the same respect as smoke detectors!

# Warning Reception

- Warning Point requires at least one additional method of receiving warning information
  - Local television
    - Note: The Weather Channel must NOT be used if satellite television is in place!
  - Local radio with Emergency Alert System
  - Pager or cell phone alerts

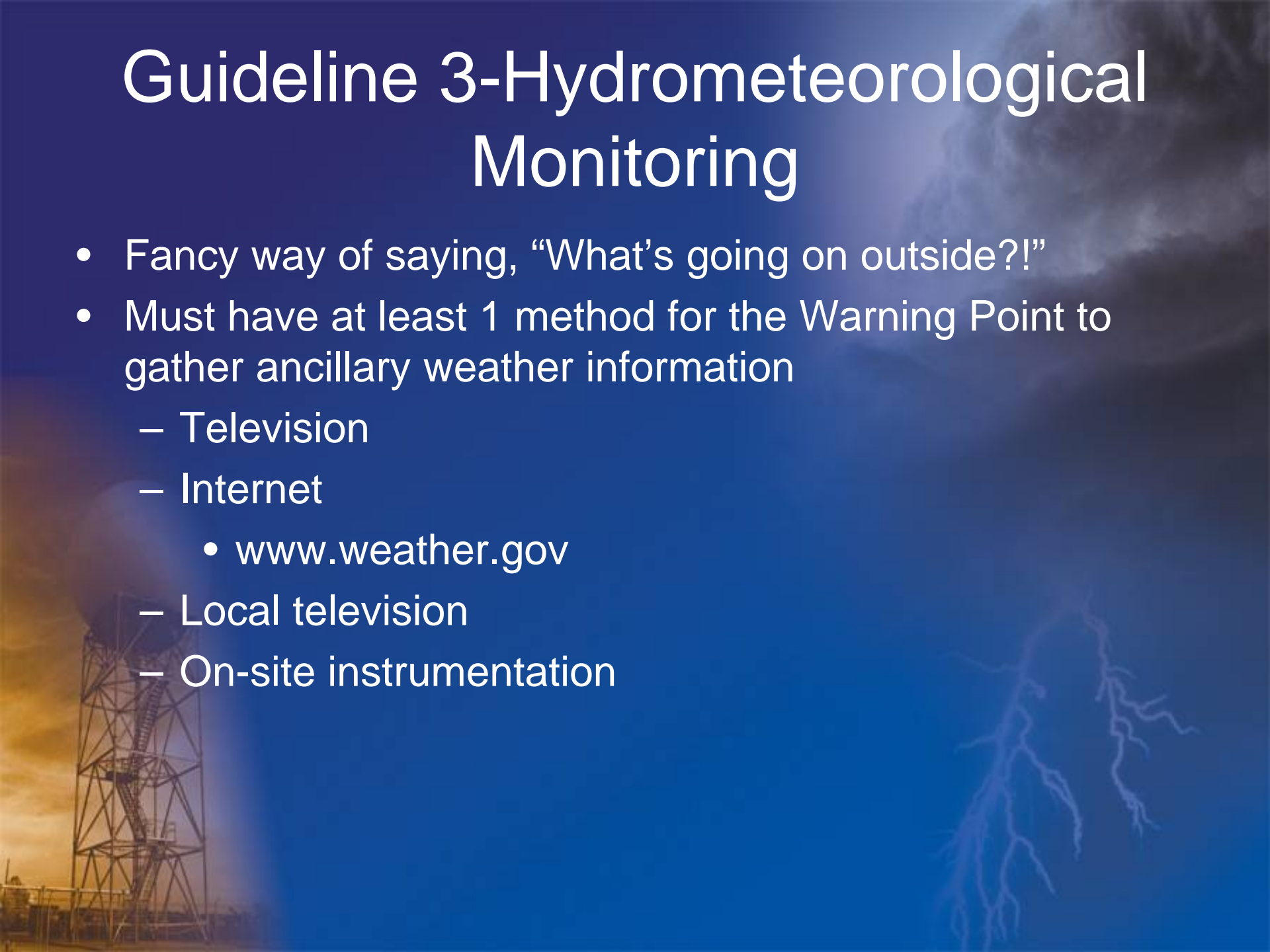
# Other Warning Reception Methods

- Emergency Management Weather Information Network (EMWIN)
- Amateur Radio
- NOAA Weather Wire
- Private Weather Enterprise



# Guideline 3-Hydrometeorological Monitoring

- Fancy way of saying, “What’s going on outside?!”
- Must have at least 1 method for the Warning Point to gather ancillary weather information
  - Television
  - Internet
    - [www.weather.gov](http://www.weather.gov)
  - Local television
  - On-site instrumentation



# Guideline 4-Warning Dissemination

- NOAA Weather Radio is the single best way to disseminate vital, lifesaving weather information to the public
  - Activates within 10 seconds of warning issuance
- Along with weather radios, as many methods of communication as possible must be utilized (at least one required)



# Warning Dissemination Methods

- NOAA Weather Radio
- Electronic sign boards
- Flashing light or alarm systems
- Pager or cell phone alerts
- Intercom or public address system
- Pop-up messages on network computers
- Redundancy is key!!

# Guideline 5-Facility Preparedness

- Well prepared staff is vital to the execution of a severe weather operations plan
- StormReady supporters should conduct or facilitate annual weather safety presentations to staff
  - Can be coordinated with local NWS office



# Community Preparedness

- Have trained storm spotters on staff
  - Training at least every 2 years
- Organizations should also designate **marked** severe weather shelters in all buildings



# Guideline 6-Administrative

- A thorough written severe weather plan is required!
- These plans should include the following:
  - Detailed warning system activation criteria and procedures
  - Evacuation and sheltering plans
  - Storm spotter roster and training record
  - Participation in annual exercises relating to natural hazards

# Administrative

- Representatives from the local NWS office should be scheduled to visit Supporters to assess preparedness and meet with safety officials
- Community or corporate safety personnel are also encouraged to periodically meet with city, county, and state emergency response agencies to re-assess coordination of response plans

# Severe Weather Planning and Preparedness-Success!

## Parson's Manufacturing Plant, Roanoke, IL



Owner Bob Parsons said the time and energy invested in their plan over the years was paid back with dividends on July 13, 2004. He encouraged other business owners to follow suit.

# View from the Parson's Parking Lot - July 13, 2004

F4 Tornado west of Roanoke, IL  
Winds were approximately 210-240  
mph as tornado crossed IL Route  
117 and struck the plant.

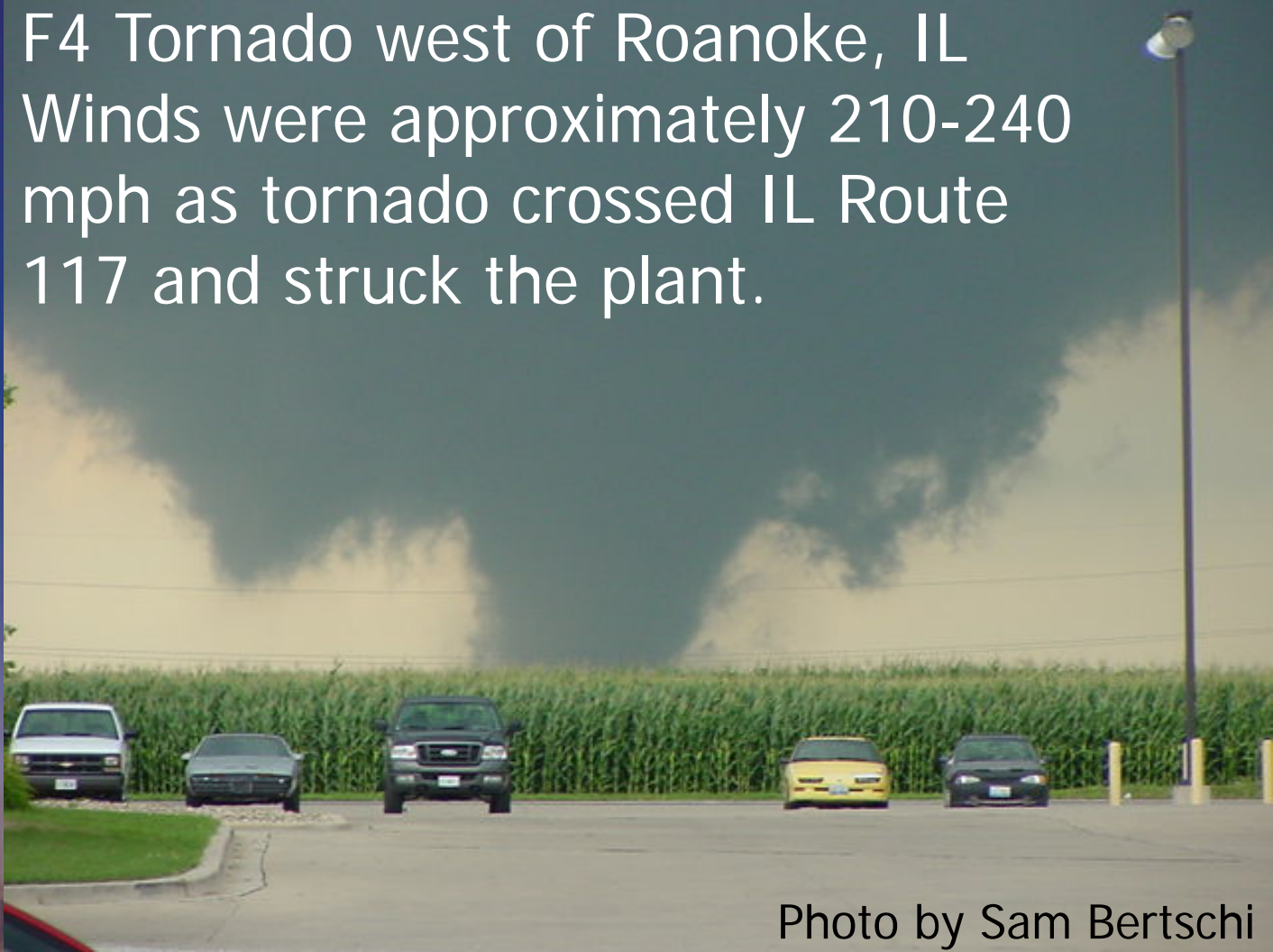


Photo by Sam Bertschi

# Parson's Plant Destroyed



Photo by Woodford County ESDA



"My life is more fulfilled because I don't have to kick myself because I failed at providing a safe workplace for my employees," Parsons said. "The money invested in shelters and your safety plan is just another piece of insurance against the unexpected. Along with that, is the moral obligation to do what is right to take care of your employees and protect your business."

- Owner Bob Parsons

# Reinforced Tornado Shelters

Company planning and paying attention to developing storms were key factors in protecting more than 140 employees when an F-4 tornado demolished the plant.



Photo by Matt Dayhoff

# StormReady Success Story

## Van Wert, Ohio

### F4 Tornado - 11/10/02

- November 10th, 2002 - F4 Tornado rips a 53 mile long path of destruction in Ohio from southwestern Van Wert County into Henry County



In Van Wert County, the tornado claimed 2 lives and injured 17.

Prompt action by those paying attention to the weather and receiving the tornado warning prevented a greater loss of life.

# Van Wert Cinemas – November 2002

The benefits of being StormReady were illustrated at the Van Wert Cinemas, where a tornado warning was broadcast live over a local warning alert system



Theater management responded by moving over 50 adults and children to a more secure portion of the theater, just minutes before the tornado struck

# Van Wert Cinemas – November 2002

While the November 10-11 tornado outbreak killed 35 people, there were no fatalities within the theater



Van Wert County, Ohio, earned StormReady designation just 10 months before the tornado struck

# A Quick Review...

- StormReady is a program developed by the National Weather Service to help government and non-government partners and customers prepare for severe weather BEFORE it happens
- StormReady is organized under 6 headers
  - Communications
  - Warning Reception
  - Hydrometeorological Monitoring
  - Warning Dissemination
  - Facility Preparedness
  - Administrative



Remember, we can't control  
**Questions??**  
the weather, but we CAN  
control how we react to it!

[Andy.Boxell@noaa.gov](mailto:Andy.Boxell@noaa.gov)