



Metro Skywarn



Editor: Dave Johnson, NØKBD

Fall 2000

FROM THE CHAIR

The basic training for severe storm spotters is over for another year. More than 350 individuals received training in the 2000 season, including more than 100 brand new spotters! Without the cooperation of the Amateur Radio Clubs, businesses, and other organizations, we could not have had successful training. A huge "thank you," and a well deserved pat on the back goes to the instructors and the clubs, organizations, and individuals who helped provide this valuable training.

Metro Skywarn, Inc. begins work on next year's classes now. The first step, a review of this years' training, took place at the Board of Director's meeting on September 5, 2000. Based on the feedback received, we'll try to make improvements for next year's classes. Additionally, our new Training Coordinator, Curt, KCØFZQ, is working overtime to get class schedules lined up for next year. By the time you read this, the schedule should be firmed up, and will be announced at the annual meeting to be held Saturday, October 28, 2000 at HAMFESTminnesota. (To be held at RiverCentre, St. Paul. See <http://www.hamfestmn.org>)

I'd like to take this opportunity to invite Spotters to the monthly MetroSkywarn Board of Director's meetings. You do NOT need to be "on the Board" to attend these meetings. (In fact, some of the most regular attendees aren't.) While training and preparation for the Severe Weather season is the bulk of activity for MetroSkywarn, other matters need to be handled on a continuing basis. We always need volunteers to help. If you have ever had the desire to participate in MetroSkywarn beyond the Spotter level, this is the place to start! Besides training, we are currently working on several projects: getting a packet system implemented at NWS to allow a faster, easier flow on storm information back to Spotters; improved repeater coverage; a new edition of a Skywarn Spotters' Guide for Minneapolis/St. Paul; and (of course) fund-raising. The Board of Director's Meet

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Remember: Spotting mobile at night can be dangerous.
Please spot from home at night.

Radar Seminar and Metro Skywarn Annual Meeting at Hamfest Minnesota

On October 28th, the biggest Hamfest in the midwest gets under way at 8 am. Come and enjoy the Ham happening of year 2000. Then stick around and learn some new Skywarn skills.

12:30 pm Rm. 1: **Weather Radar 101** Dave Johnson NØKBD Learn how to make sense of what you see on weather radar. Learn why the WSR-88D Radar has brought a revolution to weather forecasting. Supplement your Severe Weather Spotter skills with radar from your local broadcaster or the Internet.

1:30 pm Rm 1: **Metro Skywarn Annual Meeting**, Board of Directors The Metro Skywarn Annual Meeting will be held once again in conjunction with Hamfest Minnesota. See a review of vintage tornado video and where you can buy training video. Hear a recap of severe weather experiences in the metro area and western Wisconsin. Give feedback to Metro Skywarn.

How to Reach Us

- * By snail mail: Metro Skywarn, Inc. 2014 Radatz Ave. St. Paul, MN 55109
- * By email: skywarn@skywarn.ampr.org
- * On the World Wide Web: The Metro Skywarn Homepage, URL= <http://www.skywarn.ampr.org>
- * The Board always needs more help. Anyone wishing to participate in Board activities is invited to attend the meetings held the first Monday of each month.

POSITION AVAILABLE: *SKYWARN TRAINER*

Vacancy for the 2001 - 2002 training season. Requires a two year commitment. Duties include training Metro Skywarn spotters in basic weather and severe storm identification as well as Amateur Radio reporting. Must attend training Wednesday Dec. 13 from 8:30 am to 4:30 pm. Requires a person have experience providing training and be an experienced Amateur Radio operator and spotter or be meteorologically trained. To apply, please contact:

Dave Johnson NØKBD (952) 891-7467 or email at n0kbd@arrl.net.

One killed, at least 14 injured in Minnesota tornado

The Associated Press

GRANITE FALLS, Minn. (July 26, 2000 10:44 am. EDT <http://www.nandotimes.com>) - Mayor Dave Smiglewski was going to pick up pizza for his family when a white funnel cloud materialized from the west in a swirling mass of debris.



This F4 tornado ravaged Granite Falls, MN., 125 miles west of the Twin Cities. See the radar image on page 5.

The tornado snaked along a 12 block path, killing one man and injuring at least 14 people while tearing up 300 to 350 homes. As many as five funnel clouds were spotted at one time.

"It was gut-wrenching, sickening to see," Smiglewski said. Wednesday morning, power had been restored to all the homes where it was possible in the town of some 3,000 people, authorities said. "Really, the emergency is over," said Duane Hoeschen of the state's Division of Emergency Management. "We are now in the recovery."

No details were released on the fatality because relatives were still being notified, said Yellow Medicine County Deputy Richard Blackwelder. Neighbors said he was an elderly man who was found under his pickup truck. Fourteen people were treated for cuts and bruises, said George Gerlach, administrator of Granite Falls Municipal Hospital.

As the storm swept in around 6 pm, 10 people and three dogs crouched in a small bathroom at the Super America gas station. "We didn't hear any sirens, nothing. The skies got real dark, real fast," cashier Amanda Velde said.

Gov. Jesse Ventura sent the National Guard to help with security and debris cleanup. Emergency workers went house to house through the disaster area, marking X's on the homes where the safety of the residents could be confirmed.

In many places, there were no houses to mark. "There's at least a half dozen of them that are gone completely," said Paul Krogstad, the city's public works director. The funnel also toppled portions of a grain elevator complex before whipping trucks around like toys at the nearby United Parcel Service facility.

The weather started turning severe Tuesday afternoon. "Around midday we got the feeling it wasn't going to be good," said Craig Edwards, a meteorologist with the National Weather Service. "There was low-level moisture and winds at about 50 miles per hour at 15,000 feet. That was enough energy to spin up severe thunderstorms that possibly led to the tornadoes."

City Councilman Odell Rude was golfing when lightning began to flash over the community about 125 miles west of Minneapolis. "I got off the course and drove up toward town," he said. "I could see insulation pieces - some as big as blankets - falling from the sky. ... The winds had stopped, but things were still falling. It was so eerie."

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Severe Weather Season Winding Down

The severe weather season got off to a relatively slow start, (actually as suggested in the February Newsletter). The large-scale pattern has generally been a west-northwest upper flow, which is usually more conducive to thunderstorms producing downburst winds and hail. There were very few if any late spring or early summer low pressure areas produced by strong upper level west to southwest winds. Strong surface cyclones with associated pressure falls produce more tornadoes, at least in the upper midwest.

Not surprisingly, the number of tornadoes is down this year. The most significant statistic is no reported tornadoes in the state in June. Most of the tornadoes have been in July and August. A rough statewide total so far this season is 20 to 30. As most of us know, the Granite Falls tornado was one of the strongest of the season in the country!

No major thunderstorms affected the Twin Cities until July 7 when the eastern suburbs were hit with high winds, hail, and a tornado. Major flooding then hit the southern suburbs late that evening. The next significant thunderstorm complex to affect the Twin Cities was not until the early morning of Aug 26 with more wind damage in the eastern suburb of Lake Elmo.

The calendar says that the severe weather season should be winding down but we all know that there have been tornadoes recently, in September and October. Perhaps the higher dew points of the last few years, as suggested by local state climatologists, are lingering into the fall?

As for the next year, climate scientists are in general agreement that neutral equatorial sub surface sea temperatures are setting up. (No El Nino or La Nina). I am thinking that this may bring an earlier/normal severe weather season next year. We'll see. Lots of time to look at more data!

Jim Richardson, WMØX

Metro Skywarn

AWIPS Up and Running

The National Weather Service has been installing their advanced workstations for forecast and warning operations since about 1996. Installation of all systems was completed during the last year, and commissioning of the last system was completed on Aug 17 at the Anchorage, AK River Forecast Center.

The system is called AWIPS (advanced weather interactive processing system) and has been in development for about 10 years. AWIPS has replaced our aging late 70's technology, which had black and white graphic screens, a minimal word processor (no spell checking!), no satellite display, and landline communications at 9600 Baud!

The AWIPS system is UNIX based with 3 servers in each office and varying numbers of workstations. The Chanhassen office has 5 workstations, each with a text display and 2 graphic displays. Numerical model information, surface, radar, and satellite data can all be overlaid and manipulated on various map scales or in a time series. Various scripting languages are available for local application development. Tcl/Tk and PERL are widely used.

Data is sent and received via wide area network and satellite links. Further development of the AWIPS system will continue, especially in radar analysis and local application development. Of course, processing speed seems to always be an issue, especially with a graphics and animation intensive environment. We are eagerly waiting for a processor upgrade!

July Sky Turns Ugly And Challenges New EOC Crew

The seventh of July the mid morning sky grows black over the north metro area cutting throughout Anoka and Hennepin counties. The sky darkened menacingly as the storm moved southeast into Ramsey County. A quick call to the National Weather Service office puts the new Emergency Operating Center (EOC) crew in the Golden Valley into action. A very interesting night begins for the new EOC operators.

As luck would have it the storm grew and moved so fast there was very little time for warnings. This prompted a few of the crew to run an informal net from their homes while other EOC ops made their way to the Golden Valley Public Service Center.

The storm cell dropped at least one tornado near Lake Elmo late in the morning. The 146.850 repeater went down in the middle of net catching a lot of people off guard. (Don't forget the other main-147.21 and backup repeaters.)

As the storm passed it left us with a few rain showers. The sky cleared early in the afternoon, the sun made it very hot and sticky. This set us up for a wild night of weather. Around 8:30 PM the TV radar showed intense storms popping up in Meeker County. The NWS requested that the EOC be activated around 9:00 PM to run a formal net. As the net was started the storm was exploding in size and intensity, the NWS could not tell us what was going to happen or where to expect problems because the storm was continuously building and changing overhead, giving everybody a great lightning show. The NWS

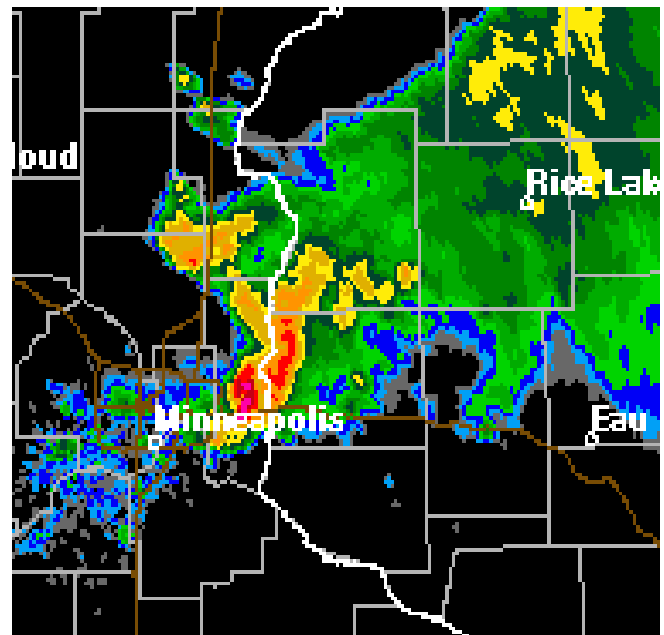
requested that we do a roll call to find out where the spotters were and let them know where the spotters were located.

We had a great response when about 60 spotter. Thanks!

As the storm moved across the metro spotter reports started to come in to the EOC. The challenge the EOC ops had was trying to copy the reports while battling the power of the storm's intensity. A few spotters were using HT's and we could hear only bits and pieces. Remember spotters, 25 watts on an external antenna is minimum equipment during severe weather.

As the storm started to lose some of its punch we were told the storm was no longer tornadic and it would become a major rain event. In Eagan that night, nearly 12 inches of rain fell. What a day for a new EOC crew to be put into action. Thanks to all the spotters who participated.

Joe C. KCØGYJ



Here is a radar image of the morning storm just after it dropped a tornado in Lake Elmo.

SKYWARN Group Call Pager Suppliers

MinnComm	520-8122 Ask for Barb
PAGE NET	884-4400 They program the group code into the pager you may have to take the pager in or order a replacement if this is not a new account. Most Customer service reps should be aware of this.

Regardless of what kind of service you purchase this is an numeric only group call. We use codes to facilitate communications. The codes are:

Code	Explanation
162550	NOAA Weather Radio alarm. An auto dialer attached to a weather radio trips when ever KEC 65 sends out the alert tone for the Metro Area. (Note this is the single tone not the EAS / SAME Codes this dialer reacts to.) Turn on your WX Radio or dial up the frequency to hear what is going on. You should receive this code every first Wednesday of the month at about 1300 hours and for watches and warnings.
999	Formal Net up.
333	Training net.
111	Nets in standby
000	Nets shut down.

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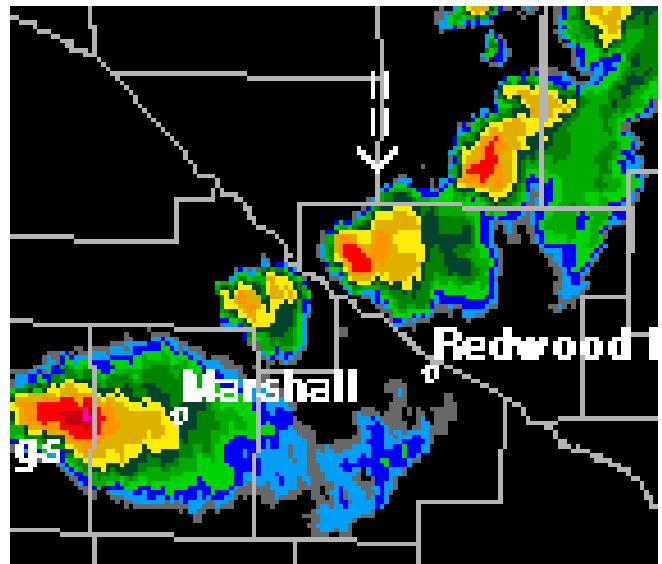
ings are the first Monday of the month, starting a 7 PM..

The meeting location moves around the metropolitan area, so that all have an opportunity to attend. Contact any of the MetroSkywarn Board of Directors listed in the Newsletter for further information.

Metro Skywarn is (still!) planning to offer one or more Advance Classes. We didn't make it for 2000, but we haven't given up! You have one more chance to give us input for planning the class. If there are things you would like to know about the weather, not just severe storms, please provide us with topics and questions you would like to see addressed. We'll do our best to see that the material is included in the class. If there is sufficient interest, we'll get something scheduled, and make an announcement during normal training sessions in Spring 2001.

Again, thank you all for your help and support during the 2000 season.

*Donn Baker
WA2VOI/Ø
Chairman (Acting), MetroSkywarn Board of Directors*



This rather innocent looking cell produced the countries only F4 tornado in Granite Falls on July 7th, 2000. One died and 20 were injured. See page two for a complete story.

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& COMPUTER EXPO!

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Check us out on the Web: <http://www.hamfestmn.org>

For More Information, Call Hamfest Hotline (612) 535-0537

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