



Metro Skywarn



Editor: Dave Johnson, NØKBD

Fall 1999

From the Chair

The basic training for severe storm spotters is over for another year. Without the cooperation of the Amateur Radio Clubs and others, we could not have successful training. A large thank you goes to the instructors and the clubs, individuals and organizations helped provide this valuable training.

Metro Skywarn, Inc. begins work on next year's classes now. The first step, a review of this year's training, took place at the Board of Director's meeting on August 2, 1999.

More Skywarn Instructors Needed! Next year starts a new three-year training cycle and a chance for spotter to take another step by becoming an Instructor. The Instructors' class will be held in February. If you love weather, like spotting, are committed to safety and desire to teach, we need you. I would encourage those who are interested in becoming Skywarn Instructors to let us know now so we can plan for you being in the class.

Advanced Classes being planned. Metro Skywarn is planning to offer one or more Advance Classes this fall and maybe next spring. If there are things you would like to know about the weather, please provide us topics and questions you would like addressed.

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

Metro Skywarn Classes at Hamfest MN!

Saturday October 30th
8 to 4pm

St. Paul RiverCentre

10:15 Room 2 SKYWARN 101: Understanding Weather: Why do we have the weather we have? A basic understanding of the conditions and forces that create our weather.

1:15 Room 2 SKYWARN 501: Advanced Skywarn Training; Wanna know more about the fine art of Severe Weather Spotting? This advanced seminar is designed to reach well beyond the basic spotter course to make you a better spotter.

2:15 Room 2 Skywarn Annual Meeting. An open forum and discussion. Your chance to tell us what you think.

How to Reach Us

- * By phone: Call evenings Board Chair: Lynn DeLong, NØCVI at 566-1299
- * 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 Official Homepage, Skywarn Central
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. Call Lynn at 566-1299 for directions.

POSITIONS AVAILABLE: SKYWARN INSTRUCTORS AND COORDINATOR

Vacancies for the 2000 training season. Instructors need for a three year commitment. Training to be held in February. Experience as a spotter or knowledge of weather preferred. Training Coordinator duties include contacting clubs and sponsoring organizations, scheduling Metro Skywarn Classes, and coordinating instructor assignments. Meet monthly with Board. The workload is heaviest in January. Prefer someone to start by 12/1/99. To apply, please contact: Lynn DeLong at ledelong@frontiernet.net or (612) 566-1299.

EOC Net Control Operators Class Held in Bloomington attended by 11 spotters. Dakota County EOC has not been operating this summer. A BIG THANK YOU to the EOC staff at Bloomington and Ramsey County for picking up the duty. A welcome to Golden Valley Public Safety and Twin Cities FM Club as Metro Skywarns' newest EOC. A very special thanks to Mike Sigelman KØBUD for spear-heading the start up efforts and to the TCFMC and all that helped quickly to equip the station. GVEOC Commander will be Ray Clare, KBØQDF. We still need more Net Control Operators; please contact us if you are interested.

Little Doppler has found a home. The Doppler Weather Radar that was used at the MSP Airport before NexRad has found a new home. It will be installed on the roof of North Memorial Medical Center in Robbinsdale. We are looking for radar technicians and others that are familiar with Collins p/n 622-5122-401 Doppler Weather Radar S/N 1262 Receiver/Transmitter FCC Data WRT-701C. If you can help, please contact me.

Skywarn News: If you have not subscribed to our online news, you are missing some

Metro Skywarn

good information. During the storm season, we post important information for spotters. Recently, we have been featuring Weather related websites. To subscribe to [Skywarn News](http://www.vyger.net/VygerMailList.html), go to: <http://www.vyger.net/VygerMailList.html>. Thanks to <http://www.vyger.net> for the ongoing support of Metro Skywarn, Inc.

Skywarn Central is the Metro Skywarn, Inc Website. Here you will find information about Metro Skywarn and links to many other weather sites. Thanks to Dave Johnson, NØKBD for the most excellent Website. Thanks also to Twinslan for it ongoing support of Metro Skywarn and Skywarn Central. Visit [Skywarn Central http://www.skywarn.ampr.org](http://www.skywarn.ampr.org) and check it out today.

*Wx4U may be the callsign of an extra class from Naples FL, but here it is the featured frame of Skywarn Central. Wx4U (weather for you) is easy to navigate to get information about weather around the country. When you visit Wx4U subscribe to the free e-mail weather information, from You@WeatherMail. When you <<http://wx4u.com/join.asp>> sign up for your FREE account, the WeatherMail server will monitor data direct from the National Weather Service, and send you email any-time a message that matches your requirements is received. There are no delays while an operator interprets messages and routes them; it's all automatic. You receive the email within seconds of issuance by any National Weather Service office. **Warning:** use only one zipcode per geographical region when registering. A Twin Cities' Zipcode will get info from Chanhassen and Duluth NWS and covering Central (Dakota Border to (EauClaire) and NorthEastern MN along with West Central and NorthWestern Wisconsin. Putting in other Zip Codes in this area will get you duplicate messages.*

Finally, a note a Very SPECIAL NOTE OF RECOGNITION. The City of GEM LAKE is on the METRO SKYWARN MAP with a great BIG HEART SYMBOL. On Monday, June 21st the City presented Metro Skywarn with a Check for \$500. Aid Association for Lutherans has matched Gem Lake's contribution. Metro Skywarn, Inc. exists because of contributions big and small, we need them all.

*Severe clear and mild,
Lynn*

Weather Warnings: Not So Simple

Weather warnings are issued in a variety of ways from the National Weather Service in Chanhassen. Normally all of these methods are accomplished virtually simultaneously by several different staff members.

Our first priority is to use a dedicated voice landline to the Minnesota State Patrol district offices, which in turn relay the warning to the pertinent county sheriffs offices. Thus, law enforcement can quickly initiate their warning procedures.

During this voice contact, we may need to recommend activation of outdoor warning sirens for prescribed areas; this is done only for tornado warnings or for straightline winds of 75 mph. The only exception is Dakota County which activates sirens for all severe thunderstorm warnings (3/4" hail or 58 mph wind) in addition to tornado warnings. Sirens also are sounded whenever local fire or law enforcement believe a need exists. Sirens are activated only by the dispatcher; the National Weather Service cannot sound them.

Meanwhile, another person uses our com-

puters' graphical editor to draw the boundaries around a warning; this enables the computer to compose the text of the written warning. The warning coordinator edits the text as needed, then disseminates it to the outside world by means of our satellite uplink. TV and radio stations and the Department of Public Safety are among those who have the capability of receiving this transmission off the satellite.

At the top of each warning is a specific code that identifies the type of warning, counties included, and expiration time. This is why the TV stations generate a crawl so quickly; their computers read the coding from our warning and broadcast it right away.

Some private companies also use the code to set off pagers, cellphones, send the warning via fax or e-mail, etc. The National Weather Service also places warnings and statements from across the country on a web site: <http://iwin.nws.noaa.gov>

At the same time, the warning is broadcast immediately on NOAA Weather Radio. It is also disseminated on our teletype that connects us with FAA personnel at MSP International Airport. Finally, the Twin Cities TV stations have installed hotlines so that we can ensure they are aware of the warning.

If routine communications fail, we can contact the La Crosse National Weather Service by radio to have them issue the warning on our behalf.

All this is normally done within a couple minutes of the decision to warn. And then we start it all over again for the next storm!

Todd Krause KBØSGH
Warning Coordination Meteorologist
National Weather Service Chanhassen

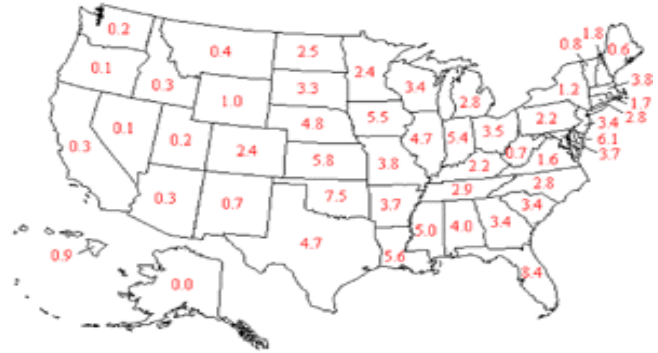
The Calamity on May 3, 1999

From www.nws.noaa.gov

Devastating tornadoes hit portions of Oklahoma and Kansas on Monday evening May 3rd, 1999. The estimated death toll stands at 49 people, 44 of the fatalities in Oklahoma and five in the Wichita, Kansas area. Additionally, the same storm system resulted in one death in Texas and four deaths in Tennessee, bringing its total to 54. The largest tornado (F-5) on the Fujita-Pearson Tornado Scale formed about 45 miles southwest of Oklahoma City and cut a path at least a half-mile wide as it moved north and east across the Oklahoma City area, staying on the ground for about 4 hours. This photo from the newspaper, "Daily Oklahoman" shows detailed Aerial Tornado Damage. Preliminary estimates show that 76 tornadoes occurred during the event across the southern plains states. Oklahoma officials now estimate that 8093 homes or businesses were damaged or destroyed; while Kansas estimates 1109 homes or businesses were destroyed. A track map courtesy of the NWS Disaster Survey team Central Oklahoma Tornado Track Map shows the approximate damage paths and highest Fujita scale ratings for tornadoes occurring in Central Oklahoma on May 3rd, 1999. The insurance industry expects insured losses to reach or exceed \$1 billion.

The storm system also produced heavy rainfall in portions of Oklahoma, Kansas, Missouri, and Arkansas. The following file provides preliminary rainfall totals related to this storm system -- Rainfall Data. Seven locations reported over five inches of rain, and some isolated flooding occurred.

The central part of the U.S. is traditionally known as ""Tornado Alley". This "alley" covers the states from Texas northward to the Dakotas. This part of the country experiences a unique combination of geography and climate which enhances severe weather events. Dry air flowing eastward from the Rockies meets the warm, moist air flowing north



Annual Average Number of Tornadoes per 10,000 Square Miles by State. 1950-1995 (Numbers are single digit followed by a decimal.)

from the Gulf of Mexico, and cooler air flowing southward from Canada. These atmospheric ingredients fuel violent thunderstorms which spawn tornadoes. Springtime is prime time for violent deadly tornado outbreaks in this part of the U.S., and these outbreaks are part of the climate pattern of the U.S. A continuing major challenge is increasing prediction skills and lead times before these events occur. The above map depicts the average annual number of tornadoes per 10,000 square miles. Note that the highest incident number of tornadoes occurs in Florida with Oklahoma ranked second. Additional tornado climatology maps are available from NCDC Tornado Climatology Maps for the U.S

Hurricane Floyd

From www.nws.gov

Floyd brought flooding rains, high winds and rough seas along a good portion of the Atlantic seaboard from the 14th through the 18th of September. The greatest damages were along the eastern Carolinas northeast into New Jersey, and adjacent areas northeastward along the east coast into Maine. Several states had numerous counties declared disaster areas. Flooding is causing major problems across the region, and over 40 deaths have been reported. Damages exceed the \$1 billion mark and will probably be much higher.



Spatial Comparison of Hurricanes Floyd and Andrew. These images were taken when Floyd and Andrew were nearly at the same location. Floyd is at least twice as large as Andrew; however, both hurricanes were Category 4 storms with sustained winds around 120 kts and a central pressure of about 933mb.

Floyd's large size was a greater problem than its winds, as the heavy rainfall covered a larger area and lasted longer than with a typical category 2 hurricane. Approximately 2.6 million people evacuated their homes in Florida, Georgia, and the Carolina—the largest peacetime evacuation in US history. A brief summary of the impacts:

North Carolina: 21 deaths; most roads east of I-95 flooded; Tar River crests 24 feet above flood stage; over 1500 people rescued from flooded areas; over 500,000 customers without electricity at some point; much of Duplin and Greene Counties under water; severe agricultural damage throughout eastern NC; Wilmington reports new 24-hour station rainfall record (128 year record) with 13.38 inches and over 19 inches for the event.

South Carolina: 1 death; Myrtle Beach reports 24-hour rainfall of 14.00 inches, which may be a new state record.

Virginia: 3 deaths; over 100,000 customers without electricity at some point; 9-12 feet of water in downtown Franklin.

Maryland: Over 250,000 customers without electricity at some point.

Pennsylvania: 8 deaths; over 250,000 customers without electricity at some point; over 4000 homeless.

New Jersey: 4 deaths; over 100,000 customers without electricity at some point.

New York: 2 deaths; over 60,000 customers without electricity at some point.

Delaware: 2 deaths.

The following states have reported one death each: Rhode Island, Connecticut, Massachusetts and Vermont.

The Bahamas also reported 1 death with severe damage on Abaco, Cat, San Salvador, and Eleuthera Islands.

Hurricane Floyd Wind Gust Reports Hurricane Floyd Preliminary Rainfall Amounts (those > 5 inches)

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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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