



# Metro Skywarn



**Editor: Dave Johnson, NØKBD**

**Fall 2002**

## FROM THE EDITOR

Dave Johnson, NØKBD

It was a quiet season, yet there were still several net activations. Winter is nearly here and contrary to what you might think, this starts a busy time for the Metro Skywarn Board. Already our Training Coordinator is scheduling classes for the 2003 training season that starts in early March and runs to June. The complete schedule will be published in the Spring newsletter, and also on the Skywarn Central web page (<http://www.skywarn.ampr.org>). Any changes, if necessary, will be posted to the web page. Please remember that if you did not train in 2002, you must retrain in 2003 to remain active.

This is the first newsletter published on the web. All spotters who requested the newsletter sent to them this way and all members of the SWNews mailing list received a notice of this newsletter and a link to the webpage where it was located. If you wish to stop receiving the newsletter, visit <http://lists.twinslan.org/twinslan/listinfo/swnewsletter> and unsubscribe. Or if you aren't already subscribed, feel free to do so now by visiting the same site.

Metro Skywarn requires a lot of volunteer time. Spotters spend hours every year participating and re-training. Board members spend several hours each month and more on occasion to maintain and build the organization. We need new participants on the Board for fresh energy and ideas. Please step up to the plate and do your part to keep this organization growing and forever creative.

## Metro Skywarn Annual Meeting at Hamfest MN

**October 26**

This year you will have a unique opportunity to plan Metro Skywarn's Future. Enclosed in this issue is a Draft Strategic Plan for Metro Skywarn developed by the Board of Directors. We present this to Metro Skywarn spotters for their feedback. We need your suggestions to make the future of Metro Skywarn. Please attend the annual meeting and give your suggestions. Or email the Board at [skywarn@skywarn.ampr.org](mailto:skywarn@skywarn.ampr.org) with your comments.

Also featured is seminars at Hamfest MN by local spotters:

### What's New and Exciting in Weather Technology

Peggy Wilenburg, KCØKZB, tours new technology being used by hams for Severe Weather Tracking and Reporting. This topic is peaking the interest of many hams. Learn about all the new gadgets that will be coming to help track and predict weather. Hear how weather-watchers of the future will be using the new technology.

### APRS Locates All The Action

Wayne Willenberg, KK6BT, opens up your opportunity to hear what is happening with APRS and how you can get into this rapidly growing activity. APRS isn't just a way to get your radio to beep at you. Come hear about what it takes to get started and what you can do with APRS.

## POSITIONS AVAILABLE:

**Net Operators** - Metro Skywarn is looking for weather wise Amateur Radio Operators in the Mpls/St.Paul area to take a major role in Skywarn Nets. The Emergency Operation Center at the National Weather Service Field Office in Chanhassen is looking for Amateur Radio Operators with flexible hours to work during severe weather events in Central East Central Minnesota and Western Wisconsin. Contact John Kelly at 952-944-3572 or [n0tgy@aol.com](mailto:n0tgy@aol.com).

The Emergency Operations Center at the Golden Valley Public Safety Building, sponsored by the Twin Cities FM Club is looking for Amateur Radio Operators with flexible hours to work during severe weather events in the Metro Area. Contact Tim Arimond NØBYH at 952-593-1404.

**Certified Instructors** - responsible for teaching Metro Skywarn spotters in severe weather identification and reporting. Persons interested must commit to teaching at least three classes annually for three years. Interested parties must attend advanced training on Wed Feb 18 and Thu Feb 19 2003. Time commitment estimated at 5 hours per class March to June. If interested, contact Dave Johnson 952-888-3015 or email: [n0kbd@arrl.net](mailto:n0kbd@arrl.net).

**Assistant Webmaster(s)** - Under supervision of the Webmaster, monitor, maintain and update "Skywarn Central" ([www.skywarn.ampr.org](http://www.skywarn.ampr.org)). Preference given to experience with Website operations, design and setup. Direction and training available, if needed. If interested, contact Dave Johnson NØKBD, 952-888-3015 or email at [n0kbd@arrl.net](mailto:n0kbd@arrl.net).

### Also Wanted:

**Members for Ongoing Committees of the Board in the areas of:**

**Fundraising,  
Newsletter,  
APRS,  
Long-Range Planning,  
Webpage Development.**

To apply, please contact Dave Johnson NØKBD, 952-888-3015 or email at [n0kbd@arrl.net](mailto:n0kbd@arrl.net).

## NOAA 2002-107 FOR IMMEDIATE RELEASE

Contact: Frank LePore

8/21/02

### AFTER 10 YEARS, HURRICANE ANDREW GAINS STRENGTH

In the record books, it's still one of America's costliest hurricanes, and today National Oceanic and Atmospheric Administration (NOAA) scientists announced [Hurricane Andrew](#) was even stronger than originally believed when it made landfall in south Florida 10 years ago this week. Based on new research, scientists upgraded the storm from a Category 4, to a Category 5, the highest on the

### [Saffir-Simpson Hurricane Scale.](#)

In their re-analysis of Hurricane Andrew's maximum sustained surface-wind speeds, NOAA's National Hurricane Center Best Track Committee, a team of hurricane experts, concluded winds were 165 mph – 20 mph faster than earlier estimated – as the storm made landfall. Herbert Saffir, a structural engineer who co-designed the Saffir-Simpson Hurricane Scale, joined the committee as an observer and reviewed the team's results.

The upgrade makes Andrew only the third Category 5 (wind speeds greater than 155 mph) hurricane on record to strike the continental United States. The other two Category 5 storms were the "Florida Keys 1935 Hurricane," and Hurricane Camille in 1969.

"There is always some uncertainty in determining the maximum winds in a hurricane, and Andrew is no exception," said Max Mayfield, director of the [National Hurricane Center](#), a part of [NOAA's National Weather Service](#). "Our previous estimate was 145 mph, based on the science available in 1992. With advanced research techniques and technology, we now estimate the winds were stronger."

Andrew was directly responsible for 23 fatalities in Florida and Louisiana, and about \$25 billion in damages (1992 dollars), according to NOAA.

The National Hurricane Center has had an ongoing program to review the historical record of all storms. Scientists and other researchers note that society needs an accurate account of the frequency and intensity of past catastrophic events to best plan for the future.

"We have recently completed a review of a re-analysis of storms from 1851 to 1910," said Colin McAdie, chairman of the [National Hurricane Center's Best Track Committee](#). This re-analysis effort was undertaken by a team led by Dr. Chris Landsea of NOAA's Hurricane Research Division (HRD) and supported by a grant from the NOAA Office of Global Programs (OGP).

Hurricane Andrew is one of the most significant cases studied. According to McAdie, scientific understanding of the wind structure in strong hurricanes has significantly increased since 1992. For Andrew, the Best Track Committee considered input from scientists at the HRD, including the "re-analysis team" and National Hurricane Center.

Since 1997, forecasters have used [Global Positioning System dropwindsondes](#), a measuring device dropped from hurricane reconnaissance aircraft into the eyewall – the

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# ***Metro Skywarn***



## **DRAFT**

### **MISSION AND OBJECTIVES**

Metro Skywarn is an organization of Amateur Radio Operators and Severe Weather enthusiasts with interests in the areas of severe weather spotting and Amateur Radio communications as a public service. This organization operates in the Metro Area of the Twin Cities of St. Paul and Minneapolis, Minnesota and surrounding Counties in the states of Minnesota and Wisconsin.

#### **Our mission is to:**

1. Provide a training and education program for severe weather spotters.
2. Operate and maintain Amateur Radio communication networks to relay weather spotting reports to the National Weather Service.
3. Do scientific, technical evaluation and investigation of severe weather spotting techniques and methods of providing this information to the National Weather Service,

#### **To accomplish this mission Metro Skywarn will:**

1. recruit Amateur Radio Operators who have a sincere interest in Severe Weather spotting and in emergency and public service communications and who have a willingness to participate in severe weather spotting.
2. conduct classes and distribute educational material to severe weather spotters to ensure quality reports to the National Weather Service.
3. coordinate service among various Amateur Radio organizations and the National Weather Service to set standards for Amateur radio-based Skywarn Nets, equipment and procedures, and facilitate execution of such nets.
4. maintain interest, communicate with, and educate spotters through newsletters, email, world-wide web and any other appropriate means.
5. hold an annual meeting with the purpose of informing spotters of Metro Skywarn's operations and accomplishments each year and solicit input into the strategic plan.

# *Chanhassen Weather News*

## **Brief Notes on Severe Weather Stats:**

The severe weather season turned out to be a long one, starting out with a rash of hail storms in April, (intermixed with some late season snow!), and ending (hopefully), with a rare post-midnight tornado on Sept 10. A check of Minnesota tornado statistics 1950-1995, show only 4 other tornadoes that touched down in early morning hours. Those 4 occurred between 4 am to 6 am. The most significant event of the season for our county warning area was of course, the Ladysmith Tornado on Labor Day.

Most of the severe weather this season consisted of hail and very scattered wind reports. More importantly, just about every severe weather event developed into localized flooding. Rainfall totals from April 1 to September 3 in portions of central Minnesota, including the Twin Cities, were nearly 200 percent of normal for this time period. The large-scale summer synoptic pattern was characterized by a broad subtropical flow from the southwest with the jet stream mainly in Canada. A couple ingredients needed for supercell tornadic storms is a mid level dry intrusion driven by moderate to strong mid level winds, and strong surface pressure falls. The pattern to support these features never really developed, thus tornado numbers were down this year. The preliminary count of Minnesota tornadoes through August this year stands at 30. The Chanhassen office issued 470 severe thunderstorm warnings and 36 tornado warnings this year.

Check our web site later this fall for a more complete tornado tally and map of touchdowns.

## **NOAA Weather Radio Highlights:**

The new “voice” debuted this season, although severe weather warnings have not been added to the broadcast programming as yet. Extensive configuration work was needed to create a dictionary of local pronunciations. Most comments by phone, or to our web master

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have been favorable, when comparing to the old “voice”.

A new weather radio transmitter has been installed near Ladysmith, Wisconsin and should be operational within a month. This area of west central Wisconsin usually experiences plenty of severe weather, so this radio will be a very welcome addition to public service.

## **Additional Radio Equipment for Chanhassen:**

The Chanhassen Weather Service purchased additional radio equipment to enhance communication capabilities to spotter groups in outer portions of the county warning area. Items purchased included a Kenwood dual band radio, a Yaesu 2 meter radio, an additional power supply, a 2 meter amplifier, two 4 element 2 meter yagis, and a dual band vertical.

We would like to expand coverage to Willmar, and adjacent areas of central Minnesota. The St Cloud group may be using a new repeater at the Becker Xcel power plant on 147.345, to supplement their main repeater on 147.105.

More importantly, we have had very little contact with spotter groups in Wisconsin. There are active groups in the Shell Lakes and Siren areas, which serve Duluth’s county warning area. However, they do have spotters checking in from Barron and Polk Counties, which are in Chanhassen’s area. These groups use repeaters on 146.625...147.045 and 147.195.

Jim Richardson, WMØX.

## **How to Reach Us**

\* By snail mail: Metro Skywarn, Inc. 2014 Radatz Ave. St. Paul, MN 55109

\* By phone: Donn at 612-781-1359

\* By email: skywarn@skywarn.ampr.org, or the spotter email list swnews@vyger.net.

\* 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.

## EL NIÑO TO PLAY ROLE IN NATION'S FALL, WINTER WEATHER, NOAA REPORTS

September 12, 2002 — After months of developing in the tropical Pacific Ocean, El Niño is poised to influence fall and winter weather across the United States, NOAA's top climate experts said today. The [El Niño](#) influence will be weaker than the very strong 1997-98 version, but will still impact temperature and precipitation patterns.

At a news conference in Washington, D.C., NOAA officials released the nation's official fall and winter outlooks, which reflect the ongoing El Niño. "El Niño will likely influence the fall and winter weather patterns," said retired Navy Vice Adm. [Conrad C. Lautenbacher](#), Ph.D., undersecretary of Commerce for oceans and atmosphere and NOAA administrator. "The El Niño conditions that have persisted for months will be at moderate strength through the end of 2002 and into early 2003."

### El Niño's Impact On 2002-03 Fall, Winter



With nearly half of the United States experiencing [drought](#), the fall/winter outlook only offers "limited relief," said retired Air Force Brig. Gen. [Jack Kelly](#), director of NOAA's National Weather Service. "While some improvement in the drought is possible, namely across the Southwest and southern and central Plains states, it may not be enough to alleviate dry conditions entirely, particularly in the Northwest, Northeast, mid-Atlantic, and the Ohio Valley."

Overall, Kelly said forecasters expect El Niño's fall and winter impacts to include: drier-than-average conditions in the Pacific Northwest and mid-Atlantic states during fall; drier-

than-average conditions in the northern Rockies and the Ohio Valley states during the winter; wetter-than-average conditions in the southern tier of states during winter; and warmer-than-average conditions in the northern tier of the United States during winter.

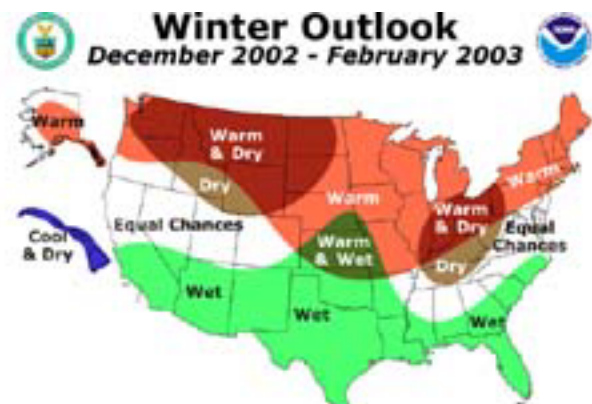
Jim Laver, director of NOAA's Climate Prediction Center, the section of the National Weather Service that produced the fall/winter outlook and tracks El Niño, said the agency's commitment to research and technology helped forecasters. "We've had our eyes on this El Niño for months, and understand it well enough to predict its likely climate impacts months in advance," he said.

Across the nation, the 2002 Fall outlook includes:

In the Pacific Northwest and mid-Atlantic states, drier than normal conditions are expected. Over the rest of the United States, there are equal chances for rainfall to be above normal, normal or below normal.

Above normal temperatures are expected in southern parts of Florida, and in the Southwest and western islands of Hawaii. Over the rest of the United States, there are equal chances for temperatures to be above normal, normal or below normal.

The 2002/03 Winter outlook includes:



Below-normal precipitation is expected in the Northwest including Washington, northeast Oregon, Idaho, Montana, Wyoming, western parts of North Dakota, and northwest South Dakota. Precipitation is also expected to be below normal in the Ohio Valley states.

In the southern parts of the United States, stretching from central/southern California to the Carolinas, precipitation is expected to be above normal.

Temperatures are expected to be above normal across the northwestern, mid-western and north-eastern states of the continental United States.

Over the rest of the continental United States, there are equal chances for precipitation and temperatures to be above normal, normal, or below normal. Temperatures are expected to be above normal over southeastern parts of Alaska.

Below-normal temperatures and below normal precipitation are expected in Hawaii.

NOAA will continue to issue monthly updates to the 2002-03 winter outlook.

The Climate Prediction Center is one of the [National Centers for Environmental Prediction](#), which is a part of [NOAA's National Weather Service](#). The National Weather Service is the primary source of weather data, forecasts and warnings for the United States and its territories and operates the most advanced weather and flood warning and forecast system in the world, helping to protect lives and property and enhance the national economy.



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about 90 percent of the wind speed measured at the 10,000-foot aircraft level flown as Andrew approached south Florida. In 1992, Andrew's wind speed was estimated at 75 to 80 percent of the aircraft observations. The research findings resulted in an increase in the estimated wind speeds of Hurricane Andrew from 145 mph to 165 mph.

#### Best Track Committee Findings:

Hurricane Andrew was a Category 5 over open water on approach to South Florida. Hurricane Andrew was a Category 5 on the Saffir-Simpson Hurricane Scale at time of landfall, with Category 5 winds occurring in a small area on the immediate coast having open exposure to Biscayne Bay. Winds at specific locations over land in Miami-Dade County are unknown due to remaining scientific uncertainties.

There should be continuing research aimed at better determining hurricane winds immediately preceding, and during landfall. The "Hurricane Landfall" component of the [U.S. Weather Research Program](#) is structured to address such a question.

When Hurricane Andrew hit southeast Miami-Dade County, Fla., Aug. 24, 1992, flying debris in the storm's winds knocked out most ground-based wind measuring instruments, and widespread power outages caused electric-based measuring equipment to fail. The winds were so strong many wind-measuring tools were incapable of registering the maximum winds. Surviving wind observations and measurements from aircraft reconnaissance, surface pressure, satellite analysis, radar, and distribution of debris and structural failures were used to estimate the surface winds.

[NOAA's National Weather Service](#) is the primary source of weather data, forecasts and warnings for the United States and its territories. NOAA's National Weather Service operates the most advanced weather and flood warning and forecast system in the world, helping to protect lives and property and enhance the national economy. To learn more about NOAA's National Weather Service, please visit <http://www.nws.noaa.gov>.

For facts and photos of Hurricane Andrew visit: <http://www.noaa.gov/hurricaneandrew.html>. The complete minutes of the Best Track Change Committee and information from the re-analysis project are found at: <http://www.aoml.noaa.gov/hrd/hurdat/index.html>.