



Metro Skywarn



Editor: Dave Johnson, NØKBD

Summer 1998

El Nino..Global Warming..Tornadoes

*by Jim Richardson, WMØX
NWS Forecaster*

It seems like "El Niño" has been the catch all phrase to explain the unusual weather events this spring and past winter. Basically, El Niño is the "piling" up of warm tropical pacific ocean water toward the western coast of South America and the weakening or absence of the normal trade winds in the eastern tropical Pacific.

This distorts the jet stream pattern, especially the polar jet, and normally gives a mild winter to the northern plains. For more details go to the Chanhassen NWS home page on the internet and you will find links to El Niño information.

In Minnesota, the main El Niño effect was of course, a very mild winter. Noteworthy, was the +14 degree temperature departure for February in the Twin Cities. This winter/spring El Niño was indeed one of the strongest ever.

Global warming has been in the news lately. Questions have been raised about more frequent and violent storms. There have been a few notable "warm events" recently. The Climate Prediction Center reports that February of this year was 3.2 degrees above average over the last 30 years over the northern hemisphere. It was the most extreme monthly temperature rise ever seen.

In late February, a 75 square mile chunk of the Larson Ice Shelf in Antarctica crumbled and dispersed into the sea.

The big weather news recently has been all the tornadoes. There have been 364 tornadoes through April 23 which is nearly 100 more than usual by this date. Although this could be a little deceiving since more tornadoes are being observed and reported.

Metro Skywarn

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

Did El Niño or global warming cause the March 29 tornadoes in Minnesota?

Even though there are some hints that global warming is occurring, I don't think this caused the tornadoes. El Niño probably was not a direct cause but some of the affects may have contributed to strong spring storms and tornadoes. Due to little or no snow pack in February and March over much of the upper Midwest, the lowest few thousand feet of the atmosphere was allowed to warm a little faster than normal. However, most of the storms were still being guided well south of Minnesota by the unusually strong jet stream at about 30-35 degrees No. This jet stream was about 40-45 m.p.h. stronger than normal for March-April.

Continued page 2

Metro Skywarn Update

Get involved in discussing the Metro Skywarn Program. Host Bill Hughes, NØQHP brings interesting topics and guests every week. It starts every Saturday night at about 8:50pm right after This Week in Amateur Radio on Saturday Ham Talk Net on the 145.21, 145.45, and 444.0 repeaters.

How to Reach Us

- * By phone: Call evenings Board Chair: Lynn DeLong, NØCVI at 566-1299
- * By snail mail: Metro Skywarn, Inc. PO Box 240963, Apple Valley, MN 55124
- * By email: Lynn DeLong ledelong@frontiercomm.net
- * On the World Wide Web: The Metro Skywarn Homepage, URL= <http://www.winternet.com/~daveej>
- * 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 556-1299 for directions.

Page 1

**POSITION AVAILABLE:
SKYWARN TRAINING
COORDINATOR**

Vacancy for the 1999-2000 training season. 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 6/1/98 in order to be oriented by outgoing coordinator. To apply, please contact:

Lynn DeLong at ledelong@frontiercomm.net or (612) 566-1299.

Most of the significant weather that occurred during the winter was when there was enough of a drift northward of the southern jet stream. Climatologically, March brings some storms to Minnesota so we were due for some action, but on the warm side.

The strong jet did indeed bend to a more SW-NE orientation and there was a rapid transport of moisture northward helped along by a warmer than normal lower atmosphere that was already in place. The storm system could have been a result of one of the few "bumps" northward of the southern, El Niño driven, jet stream. Most severe weather since March 29 has been well south and east of Minnesota.

The latest forecast indicates a continuation of El Niño conditions into June. Perhaps we will see another round of severe weather in May and then quiet down for the rest of the summer.

**Karnack says:
"Spotter Safety"**

The question is "Why does Skywarn require a 25 watt mobile? My 500 mw hand held can work the repeater."

Questions about Metro Skywarn's spotter safety requirements are posed often. The most frequently asked is like the one above. But unlike Karnack,

we do not need mystical powers to answer.

Hand-helds are great little radios. They afford the amateur portability and versatility. They do so at a price. High sensitivity combined with low selectivity results in "front-end overload" often called "intermod." Limited power supply means limited availability; one to four hours of monitoring can drain a battery just as the storm gets to you.

Low output power can not win against the high power of the storms. A severe thunderstorm or a tornado is a high power, broad band, signal generator. These storms override the front ends of hand helds. They cover updates and messages coming from the repeater to the handheld. The storms also interfere with the hand helds weak transmission capturing the repeater. The storms also can physically block the weak transmission. During the times we need the reports from the spotters the most, the storms are being received better than the hand held signal.

If for the above reasons, we have not discouraged you from using a hand held for spotting. Please consider this:

To the 30,000+ amp lightening bolt, a spotter with a hand-held appears to be lightening rod being held up by a column of electrolytes waiting to be connected to the sky.

As we continue our, 1998 spotting season remember the reasons for our efforts:

*To prevent injuries and to save lives.
Injured or dead spotters
creates a disaster.
Drive safely-spot safely-live safely.*

*Wishing you a safe,
healthy, and happy summer
from the Board of Directors of Metro
Skywarn, Inc.*

73, Lynn DeLong, NØCVI, Chair



"Old Main" in St. Peter, MN. Damaged by the March 29th tornado. This is an example of the F3 damage done that day..

PUBLIC INFORMATION STATEMENT NATIONAL WEATHER SERVICE TWIN CITIES/CHANHASSEN MN 852 AM CST FRI APR 3 1998

NATIONAL WEATHER SERVICE METEOROLOGISTS FROM THE TWIN CITIES WERE FINALLY ABLE TO CONDUCT AN AREAL SURVEY OF TORNADO DAMAGE IN SOUTHERN MINNESOTA DURING THE LATE AFTERNOON ON THURSDAY APRIL 2. FOR THE MOST PART...THE AREAL SURVEY CONFIRMED GROUND SURVEY RESULTS.

HOWEVER...THERE HAS BEEN ONE MAJOR REVISION TO THE PRELIMINARY INFORMATION WHICH WAS RELEASED TUESDAY EVENING MARCH 31.

THE PATH OF THE TORNADO WHICH HIT COMFREY WAS FOUND TO HAVE STARTED

5 MILES SOUTH OF WESTBROOK IN COTTONWOOD COUNTY. THIS NEW INFORMATION RESULTS IN A TOTAL PATH LENGTH OF 62 MILES FROM 5 MILES SOUTH OF WESTBROOK TO 4 MILES EAST OF COURTLAND.

INFORMATION ON THIS TORNADO IS STILL SUBJECT TO ADDITIONAL REVISION BASED ON INFORMATION GAINED FROM A DAMAGE SURVEY BY THE SIOUX FALLS NATIONAL WEATHER SERVICE OFFICE. THAT SURVEY IS CURRENTLY BEING CONDUCTED AND IS NOT YET COMPLETE.

LISTED BELOW IS COMPREHENSIVE INFORMATION ON ALL TORNADOES WHICH OCCURRED IN THE TWIN CITIES/CHANHASSEN AREA OF RESPONSIBILITY WITH APPLICABLE REVISIONS TO TORNADO 1 WHICH WAS THE COMFREY TORNADO. INFORMATION CONCERNING THE OTHER TORNADOES IS UNCHANGED.

Dixie's Deadly Tornadoes

Newsweek 4/20/98 Nation

TORNADO 1
COUNTIES...COTTONWOOD...BROWN...EXTREME
NORTHWEST WATONWAN...NORTHWEST BLUE
EARTH AND NICOLLET. PATH...FROM 5
MILES SOUTH OF WESTBROOK TO COMFREY
TO 3 MILES NORTHWEST OF HANSKA TO 4
MILES EAST OF COURTLAND. PATH
LENGTH...62 MILES PATH WIDTH...1.25 MILES
FUJITA SCALE RATING...F3 ***1 FATALITY***

TORNADO 2
COUNTIES...NICOLLET AND LE SUEUR.
PATH...FROM 2 MILES EAST OF NICOLLET TO ST
PETER TO 5 MILES WEST OF LE CENTER. PATH
LENGTH...18 MILES PATH WIDTH...1.25 MILES
FUJITA SCALE RATING...F3 ***1 FATALITY***

TORNADO 3
COUNTY...LE SUEUR PATH...FROM 2 MILES
NORTH OF CLEVELAND TO LE CENTER TO 1
MILE EAST OF MONTGOMERY. PATH
LENGTH...17 MILES LONG PATH WIDTH...1 MILE
WIDE FUJITA SCALE RATING...F2

TORNADO 4
COUNTY...RICE BRIEF TOUCHDOWN 3 MILES
SOUTHWEST OF LONSDALE FUJITA SCALE
RATING...F1

TORNADO 5
COUNTY...RICE PATH...FROM LONSDALE TO 5
MILES EAST OF LONSDALE PATH LENGTH...5
MILES PATH WIDTH...1/4 MILE WIDE FUJITA
SCALE RATING...F2

TORNADO 6
COUNTY...DAKOTA PATH...FROM 2 MILES EAST
OF EIDSWOLD TO 2 MILES WEST OF CASTLE
ROCK. PATH LENGTH...3 MILES PATH WIDTH...1/
4 MILE WIDE FUJITA SCALE RATING...F2

TORNADO 7
COUNTY...DAKOTA. PATH...FROM 1 MILE SOUTH-
EAST OF VERMILLION TO 2 MILES EAST OF
VERMILLION. PATH LENGTH...1 MILE PATH
WIDTH...100 YARDS FUJITA SCALE RATING...F0

TODD KRAUSE/DAN MILLER

At least the twister touched down after school hours. It was a monster tornado, with peak winds estimated at 250 miles an hour, and it ripped a mile wide swath of almost total devastation through Jefferson County, Ala. The town of Oak Grove was in its path, and the Oak Grove School, where the cheerleaders were holding an evening practice in the gym, was at ground zero. "The lights went out and the sirens went off, then the rafters fell between us," said Vicki Cunningham, 14. Miraculously, all the girls survived--but the school was a total loss. "If we had been here and done our tornado drill, we wouldn't be here," said teacher Nicole May. "We would have been in the hall, and the hall is full of bricks."

From Oak Grove the funnel cloud roared eastward through the outlying suburbs of Birmingham, leaving 30 dead and hundreds injured. "I heard the roar outside and I said, 'Bring the baby in here'," said Robert Mezick of Sylvan Springs. "About that time the hutch [cabinet] fell on top of us, and that's probably what saved our lives." A second tornado touched down in St. Clair County, Ala., killing two, and still other twisters killed nine in Georgia, one in Mississippi and one in North Carolina. Damage estimates ran to the millions, and with 95 deaths nationwide, the spring of '98 is already one of the most lethal tornado seasons in years. And it's not over.



SKYWARN Group Call Pager Suppliers

| | |
|----------|--|
| ARCH | 893-0400 Stores in Bloomington and Falcon Heights. Ask for Joel.. Dialer is not in operation. |
| 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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**Contact Jeff Kahlstorf at PageNet
612-912-5050**

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Address Service Requested