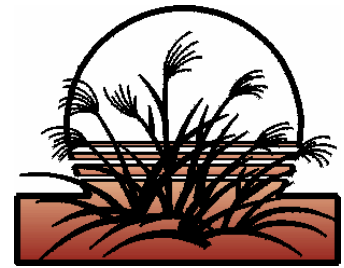




**NEWSLETTER
TWIN CITIES CHAPTER
AMERICAN METEOROLOGICAL
SOCIETY
September, 2007 Vol. 29 No. 1**



The meeting of the Twin Cities Chapter of the AMS will be at 7 PM September 18th, 2007 Twin Cities WFO, Chanhassen, MN Specific directions to the meeting can be found on page 5. AMS chapter members, interested acquaintances and potential members are invited to attend.



Featured Speaker: The Twister Sisters, Peggy Willenberg and Melanie Metz

Topic: Chasing the Greensburg, KS, tornado of May 4, 2007

“Ok, so we're not actually sisters... but we are true Twister Sisters! We started chasing together in 2001 and have become best of friends. We both enjoy life, like a good glass of wine, think the same way, and have a common desire... to capture the perfect wedge! We always agree on a target and continue to learn more from each successful chase and each bust. Every chase is a new and exciting challenge.”

“We both have a Bachelor's Degree in Science and are completed several Meteorology courses at Saint Cloud State University. We also attended a Severe Storm Forecasting class instructed by Tim Vasquez and attended the College of Du Page Severe Storms Forecasting Conference. During the chase season, we work for FOX 9 News, KMSP in Minneapolis, MN and teach basic and advanced [Skywarn classes](#). We have given educational severe weather talks for two consecutive years at a HAM radio fest in St. Paul, MN; The Importance of Boundaries for Severe Storm Initiation and Tornadoic vs. Non-Tornadoic Wall Clouds. During the summer of 2002, we volunteered as IHOP Mobile Mesonet Operators at the [National Severe Storms Laboratory](#). In early 2003, we presented a case study of the unexpected 9-10-02 midnight Albertville, MN tornado at the [Denver Storm Chaser Convention](#) and at the National Severe Storms and Doppler Radar Conference in Des Moines, IA. At the same conferences in 2004, we presented a case study of the Searles, MN tornado that developed 25 yards in front of us on July 14th, 2003. In 2005, we instructed a Severe Weather Workshop at Metro State University and presented at Science Night in Wayzata, MN. In 2007, we presented at the Minneapolis Skywarn workshop for a 2nd time. Please contact us if you would like us to present in your area.”

“While the 2002 chase season was amazing and the Spring of 2003 was unforgettable, 2004 - 2006 provided new and spectacular tornadoes. Amongst the tours with our storm tour business, and our personal chases we saw over 15 tornadoes in 2003 and close to 10 in 2004 and again in 2005. In 2006, we were able to report live from the field and warn the public of a large tornado that tracked through southern Minnesota, barely missing St. Peter.”



President's Corner: Chris Bovitz

Greetings! and welcome to another great year for the Twin Cities AMS!

The slate of officers is nearly the same this year as it was last year except for the replacement of Vice President Shelby McQuay with Lisa Schmit. Lisa is

a forecaster at the WFO and has great enthusiasm for the AMS. I think she'll be a great person to work with this year, as it will continue to be for Lori and Kurt. Thanks all of you for your time and efforts.

All that I have to say this month has already been stated in the [July newsletter](#) (click on our website's "Newsletters" then "July 2007") To reiterate:

- Newsletters: If you can put up with electronic notification or delivery of newsletters, you will save \$2 on your dues (\$1 for student members).
- Dues via PayPal: This didn't work out, but you can still pay in cash or by check.
- Member page: A [directory of our membership](#) (append "members.html" to our web site address) will be set up on our web site. It's not up and running quite yet, but it will be as we get members.
- There are still openings for the poster committee.
- There are still openings to work with DataStreme Atmosphere.
- We are still having a photo contest (with prizes!)

Oh, and one thing I sadly forgot to do last year (and almost forgot this month) was to thank Anthony Stender for his weather history column. I did find it interesting, and I hope you did, too. Thanks, Anthony.

And, as always, the best way to grow this chapter is by word-of-mouth. Post the newsletter in a prominent place; e-mail it to people you know who might be interested.

And if you are a member, and there's something that you want to get off your chest, let me know. I'll see what I can do about it.

Movin' On, Movin' Up, Movin' Out

Member Ron Trenda has acquired a steady gig as a broadcast meteorologist on WCCO (channel 4).

If you've heard some news about a member, send it to Kurt (newsletter@twincitiesams.org).

If you have big changes in your personal or professional life you would like to announce to the chapter, please send a summary to newsletter@twincitiesams.org.

Member Sign-up and the Member Page

This year, we have a new and improved [member application page](#) to support our new [member page](#) mentioned above. You can fill out the page on-line and send the information to the secretary/treasurer, or you can print it out and send it in, too. Either way, we need your dues, dependent on how you want your newsletter delivered.

As mentioned in the Corner, we're going to have a list on the web of our members. You can see it at <http://twincitiesams.org/members.html>. This will be a list that the public will see, so if there's something you don't want to be seen, denote that when you fill out the membership form. I know that web spiders are out there and can pull e-mail addresses out of web pages. To fix that, I will make e-mail addresses images, making them harder to see by these web-page-searching programs. And if you don't want any information of yours listed, let us know.



Minutes of the May 2007 Meeting – compiled by Chris Bovitz

The May 2007 meeting of the Twin Cities AMS was called to order at 7:40 p.m. in the conference room of the Twin Cities WFO by President Chris Bovitz. Preceding the meeting was a picnic dinner. There were about 12 attendees.

The treasurer's report: The checkbook balance at the last meeting was \$672.89. Expenses were \$409.45. The balance is \$263.44.

Winners of the temperature contest were announced:

- Snowfall: measured: 48.2 inches, guess by Robert Gwilt: 48.0 inches
- Temperature: measured: -17°F, guessed by Matt Friedlein and Bevan Glynn. Tiebreaker was the maximum temperature (66°F): Friedlein guessed 65; Glynn guessed 61.

There was no speaker, and the business discussed related to the activities and direction of the chapter during the past year and what we plan to do next year:

- The increase in membership was noticed, from about 40 to 53, which is probably the greatest number of members we've had.
- Our chapter is the only AMS one in Minnesota. It was suggested that we reach out to the weather communities in Mankato and Rochester.
- Member Lisa Schmit will likely attend the National AMS meeting next January in New Orleans. She suggested we get a poster made, and since she will go, depending on funding, she can present it. She will head up the poster committee.
- If we bring in a prominent speaker to present a talk to our chapter, we should ensure that we will get many attendees.
- For next year's science fairs, the presenters should have weather radio prizes with them, so when they find an exhibit deserving of an award from our chapter, the prize can be given there. There were also a number of certificates given for the national AMS.
- It was suggested varying the days of the meetings to attract a different part of the membership. We could take basic attendance numbers. It would probably help if the speaker schedule were set. A survey could be put into the newsletter.
- Being part of an open house, either with a public (NWS) or private company, might give us needed exposure.
- We could have a photo contest, open to AMS members only. A prize would be related to photography, such as a gift certificate to a photography store.
- After Labor Day and before the September meeting, a concerted effort will be made to reach out to the weather community and let them know of our existence and schedule. This will include past members, and we can ask them why they have not been a part of the chapter recently.
- Dinner meetings were remembered as good events; we'll try them again in the future.
- We will ask the appropriate people at the WFO and the RFC if they could put a link to our web site on theirs. When we have meetings or events coming up, we will ask them to put an announcement in their headlines.
- On our web site, a new and improved member page will be created, with member pictures and biographies.
- Member Craig Edwards noted that we are working with a different generation. The older generation were more community oriented, and the later generation is more like "what's in it for me?" To get new, younger members, we need to emphasize this facet of membership, specifically, the networking component.
- Kevin Hyuck gave his results so far of finding speakers for next year. These speakers and dates are not set in stone yet:
 - September: Twister Sisters, storm chasers
 - October: Jim Gilbert, climate and plants
 - November: Rich Naistat, the Department of Commerce inspector general report about the Rogers tornado
 - December: Visit to KSTP
 - April: St. Cloud State senior theses
- Another idea for a speaker was a multi-tiered talk: A case study of a storm from the perspective of forecaster, TV weathercaster, and someone from a private company such as an electric utility or as public works.

Doug Dokken mentioned a letter he received from the Science Museum regarding a proposal called Partnerships Advancing Community Engagement in Science (PACES). It's a way for community-based service organizations (CSBO) to collaborate with each other. Dokken and Kurt Scholz will write a proposal.

Adjournment was at 9:10 p.m.

Upcoming AMS Chapter Meetings and Other Events

| Date & Time | Event | Location |
|---|--|--|
| 2007-2008 Chapter Year | | |
| Tuesday, September 18, 2007 7:00 pm | September meeting Speakers: The Twister Sisters Topic: Chasing the Greensburg, KS, tornado of May 4, 2007 | Twin Cities WFO Chanhassen, MN (map) |
| Thursday, October 18, 2007 | The 15th Kuenast Lecture Speaker: Dr. Kerry Emanuel, Massachusetts Institute of Technology Topic: Divine Wind: The History and Science of Hurricanes | Room 335, Borlaug Hall University of Minnesota St. Paul, MN (map) |
| Thursday, October 18, 2007 7:00 pm | October meeting Speaker: Patrick Didier Topic: NOHRSC Gamma Snow Survey | Flying Cloud Airport Eden Prairie, MN |
| October 24-25, 2007 | 2007 Northern Plains Winter Storm Conference | Kelly Inn St. Cloud, MN |
| Tuesday, November 13, 2007 7:00 pm | November meeting Speaker: Rich Naistat Topic: His take on the DOC Inspector General's report on the Rogers Tornado | tbd |
| Second week of December 2007 7:00 pm | Tour of KSTP | KSTP-TV Studios St. Paul, MN (map) |
| January 2008 7:00 pm | January meeting Speaker: Bill Sites Topic: Life aboard a NOAA Corps ship | Twin Cities WFO Chanhassen, MN (map) |
| January 20-24, 2008 | 88th Annual Meeting of the American Meteorological Society | New Orleans, LA |
| February 2008 | February meeting Speaker and topic: tbd | tbd |
| March 2008 7:00 pm | March meeting Speaker: Jim Gilbert Topic: Climate and Plants | Minnesota Landscape Arboretum Chanhassen, MN (map) |
| April 2008 7:00 pm | April meeting Speakers: Seniors at St. Cloud State University Topic: Their senior theses | St. Cloud State University St. Cloud, MN |
| May 20, 2007 7:00pm | May meeting Picnic, recap of the year, elections, and planning for next year | Twin Cities WFO Chanhassen, MN (map) |



A Look at Weather History: September 1, 1894

Anthony Stender

Even for those of us who had to take a class in Minnesota state history, the date of September 1, 1894 probably doesn't ring any immediate bells. This was the date of a major tragedy in Minnesota history, the Hinckley fire. The fire was blamed on a combination of drought and logging practices. However, a couple of sources credit the ferocity of the fire to a temperature inversion.

Before delving into the contribution by a temperature inversion, it's important to consider the other weather factors that played a role in the fire. First of all, 1894 is one of the driest summers on record. In Minneapolis, only 1.73 inches of rain fell between May 31st and September 1st. Normally, more than 12 inches falls during this period. The maximum temperature reached 90° F on 27 occasions during that time period. The normal is 11 times.

The last three days of August witnessed highs around 80° and lows in the 50s, suggesting low dewpoints. The low on the morning of September 1 was 67°, and the high that day reached 94° F. This suggests the passage of a warm front. Records indeed indicate that the winds were out of the south that day.

Several sources have suggested that a temperature inversion held down the smoke and heat during the morning. Then, by mid-afternoon, the fire became strong enough to pierce through to the cold air above the inversion, causing the cold air to rush down to the ground and fan the flames. Unfortunately, it's not possible to go back and measure neither the strength nor the depth of that day's inversion. Similarly, it is not known how high the fire extended into the atmosphere. I have also been unable to discern who came up with the inversion theory or what facts they used to support it.

During the 1980s, a couple of studies observed that horizontal roll vortices play a role in the spread of wildland fires. Parallel streets of burnt and untouched trees were commonly witnessed after the fires had died out. These corresponded to areas of upward and downward motion within individual vortices. In most cases, the height of the roll vortices was less than that of the boundary layer, although one vortex with a diameter of 1.8 km was observed. In another case, a series of small vortices were aligned vertically instead of horizontally.

It would truly be interesting to know the scale of any roll vortices present during the Hinckley fire and what role they played on that day. Did they truly extend above a strong inversion? Perhaps further studies into the fire-weather relationship will someday reveal the truth.

Sources:

Haines & Smith, Three Types of Horizontal Roll Vortices Observed in Wildland Mass and Crown Fires. JCAM, (1987) 26:1624-37.

"Hinckley Fire of 1894", Minnesota State Fire Department Association, On the web at (8/25/2007): http://www.msfd.org/history-mn-fires_1894_hinckley.html

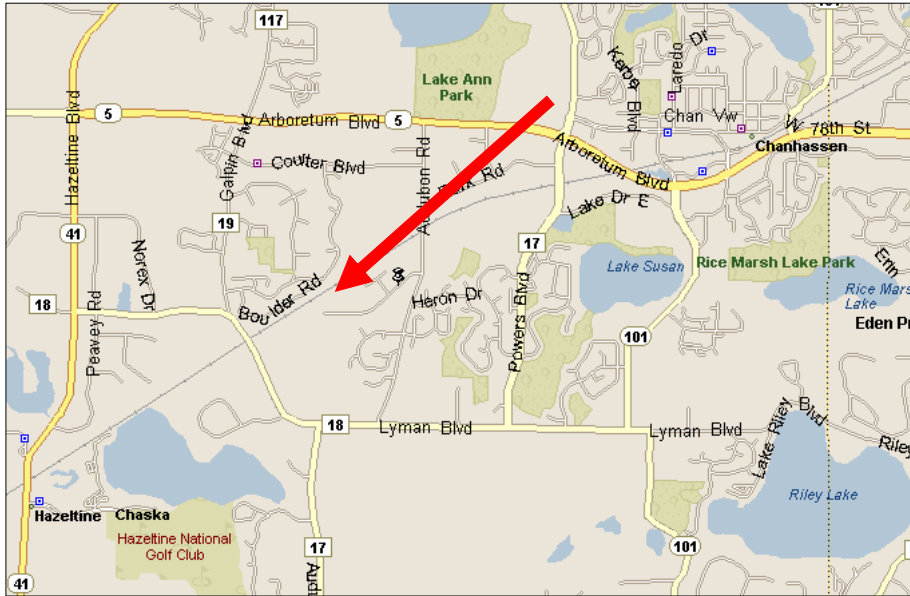
"The Great Fire of 1894", Macalester College Geography Department, On the web at (8/25/2007): <http://www.macalester.edu/geography/mage/urban/hinckley/fire.htm>



AMS on the WWW

Please check <http://www.twincitiesams.org> for lots of interesting information, changes and updates.

The September meeting will be held at 7pm, on Tuesday, September 18th, 2007, NWS, 1735 Lake Drive West, Chanhassen, MN.



Directions

Take Highway **494** to the exit for Minnesota **Highway 5** west in Eden Prairie. Travel west on highway 5 into Chanhassen. Turn **left** (south) at **Audubon Road**. Follow Audubon Road to **Lake Drive**, then turn **right** and follow Lake Drive to the NWS entrance, which will be on your left. The Nexrad radar tower will be visible as you approach the area. An alternative, if traffic is heavy and you want to avoid the Audubon turn off of highway 5, is to turn **left** at the light onto **Powers Boulevard**, and head south. You would then

take the **first right** off of Powers Boulevard, onto **Park Road**, and follow it to Audubon Road, then turn **left** and head south to Lake Drive.

Please fill out this form - either online or printed - and send it in with your annual Chapter dues (only by regular mail), whether or not you are entering the forecast contest. This information is used for Chapter purposes only, and only your name will be listed on the Chapter website, unless you tell us otherwise.

♣ information required for membership
♦ information which be posted on the member page unless you tell us otherwise

♣ Type of membership desired

- Regular member (dues: \$20/year with hardcopy of newsletter, \$18 with electronic copy)
- Student member (dues: \$6/year with hardcopy of newsletter, \$5 with electronic copy)

Personal information

♣ ♦ Name: _____ Don't publish my name

♣ Street address: _____

♣ ♦ City: _____ Don't publish my city

♣ ♦ State/Province: _____ Don't publish my state/province

♣ ZIP/Postal code: _____

♦ Country (if not USA): _____ Don't publish my country

Telephone number: _____

♣ ♦ E-mail address: _____ Don't publish my e-mail address

♦ Occupation/job title: _____ Don't publish my job

♦ Place of work: _____

You may also send us a picture of yourself for the [member page](#). Please limit the size to at most 200 pixels on a side. Attach it to the e-mail that pops up when you submit your application, or [create a new message](#) and attach it to that. Pictures (and other information) will be screened, so don't try to get cute. Okay, maybe a little.

If you've never been a member of our chapter before, how did you hear about us?

Suggestions for meeting topics or speakers:

Other ideas for the chapter:

You may also send e-mail to info@twincitiesams.org if you need to elaborate more than what there is room for here.

After submitting this form, send a check (payable to **Twin Cities AMS**) with the correct amount of dues (as noted above), to

Twin Cities AMS
c/o Lori Bovitz
20716 Hurley Ave.
Lakeville, MN 55044

Weather forecast contest entry

Entries for the weather contest will be accepted through December 15, 2007. We must receive your dues by then for your entry to qualify.

in = Total snowfall from December 1, 2007, to May 1, 2008,
as recorded at the MPX WFO in Chanhassen, MN

°F = Coldest temperature for the winter (December 22, 2007, through March 20, 2008)
as recorded at MSP International Airport

°F = Tiebreaker: Warmest temperature for the winter (December 22, 2007, through March 20, 2008) as recorded at MSP International Airport

Twin Cities Chapter AMS
c/o Kurt Scholz
3233 Snelling Ave. North
Arden Hills MN 55112-3644

