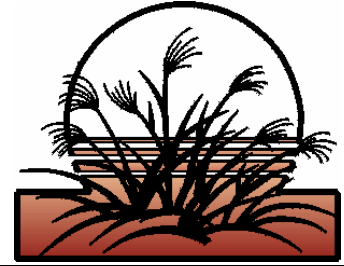




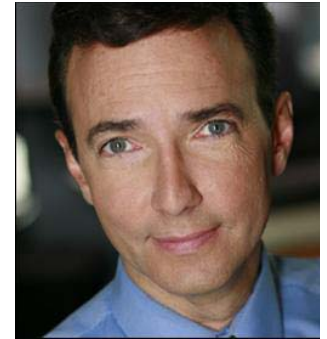
**NEWSLETTER  
TWIN CITIES CHAPTER  
AMERICAN METEOROLOGICAL  
SOCIETY  
December, 2006 Vol. 28 No. 4**



**The December meeting of the Twin Cities Chapter of the AMS will be at 7 PM Tuesday, December 12, 2006, WCCO-TV Studios, 90 South 11<sup>th</sup> Street, Minneapolis, MN. Specific directions to the meeting can be found on page 5. AMS chapter members, interested acquaintances and potential members are invited to attend.**



*Presenter: Paul Douglas. Topic: station weather operations*



Paul Douglas is Chief Meteorologist at WCCO-TV. He has been forecasting the weather for WCCO-TV's viewers since 1998. With a meteorology degree from Penn State, Paul has been broadcasting television weather reports for 25 years.

In addition to providing forecasting all kinds of weather for viewers in Minnesota and Wisconsin, Paul is co-founder and Chairman of Digital Cyclone. Digital Cyclone has developed weather applications for the wireless market. Mobile My-Cast is available on cell phones from all the major carriers, with special versions of the technology for pilots and fishermen.

Paul has taught a Broadcast Meteorology course at St. Cloud State University and lectured on climate change at the University of Minnesota. Paul writes a daily weather column for the Minnesota's Star Tribune newspaper and provides daily weather reports for three local radio stations and the local KTCA-TV program, Almanac. His new book, "Restless Skies. The Ultimate Weather Book" is available at Barnes and Noble bookstores nationwide. Paul lives in a Minneapolis suburb with his wife and two sons.



*President's Corner: Chris Bovitz*

The December meeting of the Twin Cities AMS on at 7 p.m. on Tuesday, December 12, will include a tour of the WCCO weather studios. The TV station has requested that we keep the crowd to 25 people or fewer.

And if you know of people who don't have e-mail and might be interested in attending, please spread the word to them.

Well, I guess it's winter now. Looks like someone forgot to order the snow. I don't have much to say this month. (Yeah, really.) If you want to go on the WCCO TV tour on December 12 (7 pm), [send me an e-mail](mailto:president@twincitiesams.org) (president@twincitiesams.org) as soon as possible. The 25 slots are filling up fast. Paid chapter members have priority seating (one of the perks of membership), and if there are any spaces remaining, they can be filled with guests. As of this writing (December 1), there are fewer than 5 spaces left. And a reminder: If you have anything you'd like to have mentioned at a meeting, send it to me. I'll try to keep the December meeting short to allow as much time as possible for the tour. (Yeah, good luck on that, Chris.)

Oh, and speaking of winter, get your guesses for snowfall and temperature to [Lori](mailto:sectreas@twincitiesams.org) (sectreas@twincitiesams.org) before the 15th.

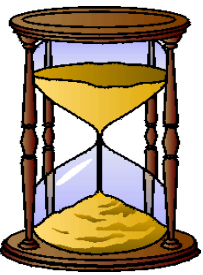
## Member of the month - Shelby McQuay



Shelby returned to the Twin Cities in 2004 after eight years of schooling in Milwaukee and Chicago. She attended college at Marquette University in Milwaukee and majored in math and physics. Shelby spent two summers at the Los Alamos National Laboratory in Los Alamos, New Mexico where she worked with the Atmospheric Radiation Measurement program (ARM). The Los Alamos office managed the Tropical Western Pacific branch of the ARM program. Her work focused on data quality and the island cloud trail phenomenon witnessed on the island nation of Nauru in the Tropical Western Pacific.

After college, she attended the University of Chicago and received a Doctorate in Geophysical Science and Masters in Public Policy. Her dissertation research looked at the variability in ultraviolet radiation through a polluted boundary layer in cloudy and clear skies. Much of the data used in the dissertation were captured in-situ at the University of Chicago. The results of her dissertation were published in the Journal of Geophysical Research.

Currently, Shelby works in the non-partisan research office of the Minnesota Senate. Originally from the northern suburbs of Minneapolis, Shelby now resides in Bloomington with her husband. She is very much looking forward to a white Christmas!



### *A Look at Weather History: Christmas, 1776*

Anthony Stender

On December 19, 1776, Thomas Paine's pamphlet, *The American Crisis*, was published. It starts with the line, "These are the times that try men's souls". Indeed, the fall of 1776 was a trying time for General George Washington and the Continental Army. After suffering defeats in New York, he retreated with his army across the Delaware River into Pennsylvania in early December, where they faced supply shortages, low morale, and the imminent expiration of everyone's enlistment on December 31.

When Washington planned to cross the Delaware to attack Hessian troops in Trenton, it was designed as a three-pronged attack that would set up the Continental Army for deeper attacks into New Jersey. As the three separate forces moved into position around sunset on December 25, the setting sun and the bright rising moon gave way to a nor'easter accompanied by rain, hail, snow, and horrible winds. The temperature also sank from 29°F at 3 p.m. to 19°F at 8 a.m. on the 26<sup>th</sup>. Once at the river, the two southernmost forces ran into a massive ice jam on the Delaware River that worsened with each hour. Attempts were made to cross the river anyway, and the few men who managed to make it to the New Jersey side were later ordered to retreat back across the river.

Washington, however, remained with the northernmost force, and they crossed the Delaware northwest of Trenton. The river was running fast, but here, the ice on the river was broken up and flowing away. With the falling temperatures, new ice began to form on the river and on the boats. The low visibility also made it difficult for the men to see across the river. Many of the men recalled being able to hear the voice of Colonel Henry Knox over the howling winds of the storm, and they credited him with their successful passage across the river. Some men did fall into the river during the passage, but each was safely recovered again. So, too, the artillery made it across.

To the dismay of Washington, it was three o'clock before everything was across the river, and it was another hour before the army was ready to march. This put the mission four hours behind schedule. The storm also continued to worsen, and the roads were slick with snow. At one point, Washington's horse

slipped on a steep and icy slope, but Washington managed to bring the animal under control to the awe of his men.

After walking into the wind for most of the night, the men were exhausted and suffering from exposure to the elements, but they were in good spirits. Shortly after seven in the morning, Washington and his troops neared Trenton, under a continued mix of sleet, snow, and heavy rain. His men were completely soaked. However, they caught the Hessians by complete surprise due to good intelligence from scouts in the field. Washington's troops split into two columns, and hidden by a snow squall, they managed to rush up on the Hessians with almost complete surprise just after eight o'clock in the morning. The victory resulted in renewed spirits, and many men chose to reenlist. Moreover, it proved true Thomas Paine's statement "the harder the conflict, the more glorious the triumph".

As a side note, on December 29<sup>th</sup> and 30<sup>th</sup>, Washington led a second dangerous crossing of the Delaware from Pennsylvania. This time, the weather was fair, but the river was completely frozen over. Men were able to cross over, but the ice could not support the weight of horses or artillery. On the second day, the men finally managed to bring some of the artillery across.

If you wish to read more about these events, check out my source for this article: *Washington's Crossing* by David Hackett Fischer (Oxford Univ. Press, 2004).

### ***Minutes of the November 21, 2006, Submitted by Lori Bovitz***

The November meeting of the Twin Cities chapter of the American Meteorological Society was held on November 21, 2006. The meeting was called to order at 7:02 p.m. by President Chris Bovitz. Vice President Shelby McQuay, Secretary/Treasurer Lori Bovitz, and newsletter editor Kurt Scholz were also in attendance. About 20 members and potential members were also present.

The secretary and treasurer reports were read and approved.

Old business focused on numerous items:

- Chris Bovitz and Karen Trammell reported on their experiences at the Northern Plains Winter Storm Workshop at St. Cloud State University on October 25-27. Chris and Karen both presented papers and they were well received. Karen reported that the second day was more operationally oriented culminating with a forecasting exercise by Phil Shoemaker from the Sioux Falls office and a presentation by Bob Weisman, a professor from St Cloud State.
- Karen Trammell has volunteered to be our science fair coordinator. All requests for science fair judges should be passed along to her and she will coordinate the volunteers for each of the events. Email can be sent to her via [sciencefair@twincitiesams.org](mailto:sciencefair@twincitiesams.org).
- Reminders on ways to get the word out about meetings were again provided. A one page flyer was added to the Web site with general information about each meeting. However, due to the restrictions on attendance for the December meeting, it was requested that only limited publicity be done for that meeting.
- John Wetter updated the chapter on what is needed to reach nonprofit status. A signed copy of the approved constitution is one of the pieces required. This was provided by the officers at the end of the meeting. The chapter would like to get this done as soon as possible. Work will resume after the holidays.
- The Department of Homeland Security is supplying free weather radios to all schools. The first batch of schools has received their radios. Chris Bovitz mentioned that he had gone to his son's school and set up the weather radio and informed the office staff how to use it. He recommended other chapter members do the same for schools in their local area.

New business focused on a few items:

- The NWS will again be participating in the Government on Display event at the Mall of America. The local AMS chapter will have information at the event and Chris Bovitz also requested volunteers to come and talk to visitors about our chapter. There was also talk to have a raffle for a weather radio; however, there may be some restrictions by the Mall. Shelby McQuay will look into what would need to be done.
- Tim Samaras, storm chaser, will be appearing at the Pantages Theater in St Paul on April 12. Discussion occurred about if the chapter wanted to attend as a group at the group rate and if reserved or general admission tickets should be purchased. There was also discussion on whether this should be our meeting for the month. It

was decided to have our meeting on the regularly scheduled date and this would be a special event for the chapter. Tickets will need to be bought soon to ensure available seats. Interested members should email Shelby and money for the tickets will be due at the December meeting.

- The next monthly meeting will be at WCCO studios. They have requested the group remain at 25 (with 30 being the absolute maximum). It was decided that members will get first priority. If fewer than 25 sign up, then spouses or other family members can attend on a first-come, first-served basis.

The meeting adjourned at 7:41 p.m.

After the meeting, John Wetter discussed experiences working as a Skywarn volunteer and storm chasing. John is the Skywarn coordinator for the local NWS office and does training for some counties in the area. He works with the office to help improve the coverage and the storm spotting process to get the best information into the office as quickly as possible during severe weather events. He also chases extensively and shared experiences, video, and toys from those chases. John is also a storm chaser for KSTP-TV, and he described how chasing for a TV station was different than not. Finally, John shared some of the “toys” used by storm chasers including equipment and software. GRLevel3 is used extensively to video radar data along with warnings and lightning. He also shared the new GRLevel2 that provides volumetric displays of the radar data. New information about storms is being learned now that real-time volumetric displays are available. It was noted in storms producing tornadoes have a reflectivity finger reaching down from the top of the storm at the time of the tornado. John mentioned that additional research is being done on how this is connected to tornado formation.

### *Upcoming AMS Chapter Meetings and Other Events*

<b>Date &amp; Time</b>	<b>Event</b>	<b>Location</b>
<b>2006-2007 Chapter Year</b>		
December 12, 2006 7:00pm	December meeting Television studio tour	<a href="#">WCCO-TV Studio</a> Minneapolis, MN ( <a href="#">map</a> )
January 16, 2007 7:00pm	January meeting - Topic: Analysis of a heat burst in western Minnesota Speaker: Karen Trammell, NWS meteorologist	<a href="#">St. Thomas University</a> St. Paul, MN
February 20, 2007 7:00pm	February meeting	University of Minnesota St. Paul
March 20, 2007 7:00pm	March meeting - Speaker from the <a href="#">Des Moines Severe Weather Conference (tbd)</a>	<a href="#">St. Thomas University</a> St. Paul, MN
April 12, 2007	Tim Samaras and 3 others will be speaking Laura.Murphy@orpheum.com	Pantages Theatre, Minneapolis
April 17, 2007 7:00pm	April meeting	to be determined
May 15, 2007 7:00pm	May meeting - Picnic, recap of the year, elections, and planning for next year	<a href="#">Twin Cities WFO</a> Chanhassen, MN ( <a href="#">map</a> )



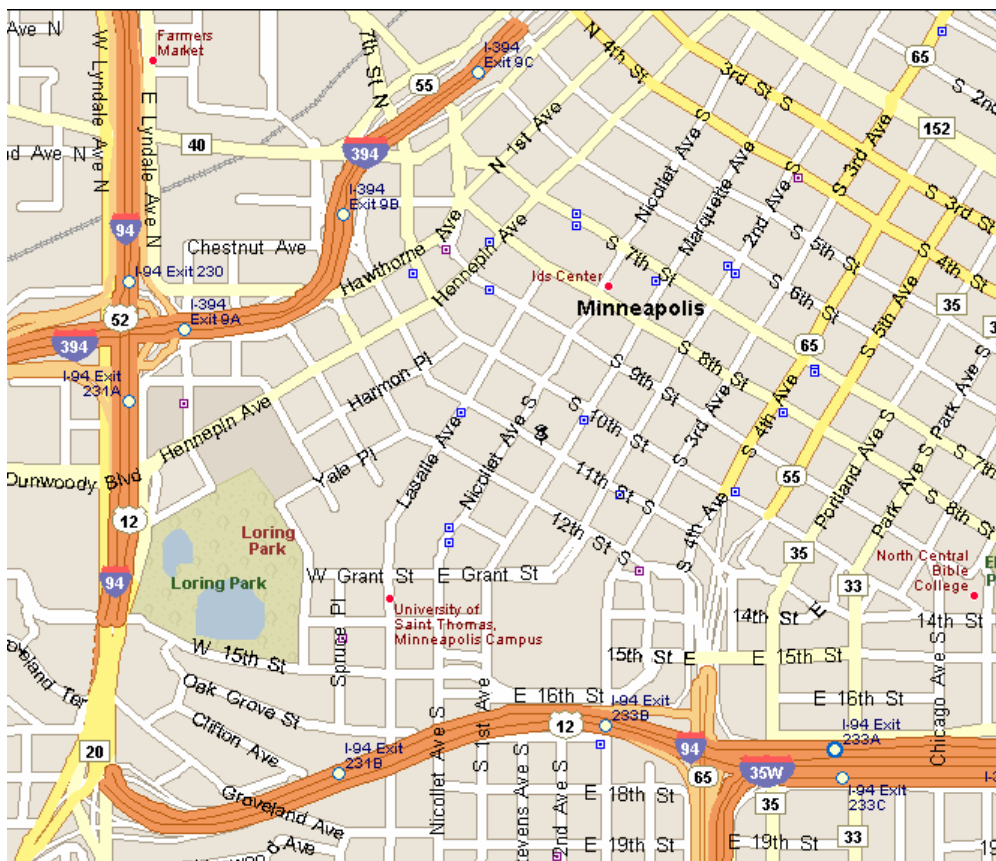
## Editor's notes - Kurt Scholz

**Last Minute Important Note!!** Tim Samaras, the well known storm chaser, and several others, are scheduled to appear at the Pantages Theater in Minneapolis on April 12. We can obtain a group rate for our members, family, and friends. Be guaranteed a seat before they even go on sale and save \$3! Email [vicepresident@twincitiesams.org](mailto:vicepresident@twincitiesams.org) by December 14th - Nonmembers welcome! Send your payment of \$24.75 per person to Twin Cities AMS c/o Lori Bovitz; 20716 Hurley Ave.; Lakeville, MN 55044.

Remember to check <http://www.twincitiesams.org> for lots of interesting information, changes and updates. Thanks to Chris and Lori Bovitz for their hard work.

If you haven't already done so, please submit your annual dues to our secretary-treasurer Lori Bovitz at the next meeting or mail your annual dues to her at the address on page 6. Dues remain at \$20 for regular members and \$6 for student members. Be sure to fill out the member registration form on page 6 and submit your forecast contest entries by December 15. Winners will receive a \$20 gift certificate.

**Reminder: Reminder: The December meeting will be held at 7pm, on Tuesday December 12th, 2006 at the WCCO-TV Studio, 90 S. 11th Street, Minneapolis, MN.**



**From the south or west on 35W northbound:** Bear right at I-35W N - go 5.4 mi. Bear left onto the I-94 W ramp to Downtown Exits - go 451 ft. Merge into MN-65 N, go 0.6 mi. Take the 11th St exit - go 0.1 mi. Bear left onto the 11th St ramp - go 235 ft. Bear left at 11th St S - go 0.3 mi. Arrive at 90 11th St S, Minneapolis, MN 55403

**From 94 westbound:** Take the 11th St exit 233A - go 0.4 mi. Bear left onto the 11th St ramp - go 235 ft. Bear left at 11th St S - go 0.3 mi. Arrive at 90 11th St S., Minneapolis, MN 55403

**From the north, southbound on 35W: I-35W joins I 94.** Take the I-94 W

exit 17B - go 0.5 mi. Take the I-94 W ramp - go 0.6 mi. Take the 11th St exit 233A - go 0.4 mi. Bear left onto the 11th St ramp - go 235 ft. Bear left at 11th St S - go 0.3 mi. Arrive at 90 11th St S., Minneapolis, MN 55403

**Please fill out this form and mail it in with your annual Chapter dues, 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 web site.**

Name \_\_\_\_\_ Daytime phone \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_

E-mail address \_\_\_\_\_ If you prefer to be notified via e-mail when the newsletter is posted on our website, rather than having us mail you a paper copy of the newsletter, check here \_\_\_\_\_

Suggestion for an AMS meeting topic \_\_\_\_\_

Dues are \$20 per year for regular membership, \$6 per year for student membership.

Make checks payable to Twin Cities AMS, and mail to:

Lori Bovitz  
20716 Hurley Avenue  
Lakeville, MN 55044

\*\*\*\*\*

**Forecast contest entry:** **Total snowfall** (inches and tenths) **for the season**, through May 1, at The Chanhassen NWS office \_\_\_\_\_

**Coldest low temperature** for the winter (Dec 21 through Mar 20) \_\_\_\_\_

Tiebreaker question: Highest **maximum temperature** for the winter (Dec 21 through Mar 20).

All temperature readings will be from MSP, Your contest entry and your 2006-2007 dues must be received by December 15, 2006 for you to be eligible to win.

\*\*\*\*\*

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

