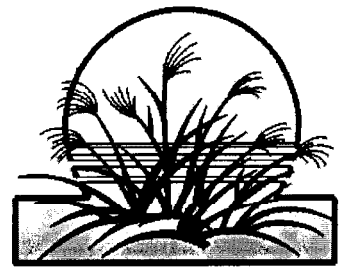




**NEWSLETTER
TWIN CITIES CHAPTER
AMERICAN METEOROLOGICAL
SOCIETY
February 2002 Vol. 23 No. 5**



The February meeting of the Twin Cities Chapter of the AMS will be at 7pm Thursday, February 21 at the National Weather Service Forecast Office in Chanhassen. Specific directions to the meeting can be found on page 3. AMS chapter members, interested acquaintances and potential members are invited to attend.



***Featured speaker: Mike DeWeese
"AHPS products and services"***

Mike DeWeese is a Senior Hydrologic Forecaster at the NWS North Central River Forecast Center (NCRFC) in Chanhassen. He grew up in Kansas, but now lives in Jordan, Minnesota with his wife and three children. Mike received a Bachelor's degree in Watershed Science from Colorado State University in Fort Collins. He brings a wealth of hydrologic experience to the NCRFC. Mike started working at the NCRFC in 1995 after serving several years as a hydrologist with the NWS River Forecast Center in Tulsa, Oklahoma. He has been involved with many projects, including AHPS, which stands for Advanced Hydrologic Prediction Services. AHPS is a suite of web-based forecast products that is now available for our area. Mike has been a leader within the National Weather Service in the implementation and improvement of AHPS services and products. He will discuss how AHPS has led to changes in NCRFC Spring outlook products in recent years, and will show some examples of current products, and their implications. Join us for Mike's presentation, and you will also have an opportunity to meet Dan Luna, who is the new Hydrologist in Charge of NCRFC.

Chapter notes- by Ron Trenda

Our February meeting is timely, since this is the time of year that we think about possible spring flooding. Mike DeWeese's talk on February 21 will also look at recent model performance during flood situations. Our March meeting will be at 7pm on Thursday, March 21 at the 3M auditorium on the St. Paul campus of the University of St. Thomas. We will view a tape on the history of broadcast meteorology that was compiled for a national AMS broadcast conference. Afterward, we plan to discuss the evolution of TV weathercasts, and share opinions about the current state of TV weathercasting. More details will follow in the March newsletter.

You recall from last month's newsletter that we had ties on both questions in our weather forecast contest. The answer to the tie-breaker question was 24 days in January with highs of 25 or higher. As a result, Don Baker wins the December snowfall part of the contest and Tom St. Martin is the winner of the high on January 1 part of the contest. Each winner will receive a \$15 gift certificate. Congratulations!

Member of the month

Our featured chapter member this month is Allen Johnson. Allen's curiosity and love for the weather developed during the years he was growing up on a dairy farm in western Wisconsin. He quickly realized how important the weather was to the productivity of the farm and, therefore, to the entire livelihood of the family. All the forage and feed for the cattle was raised on the farm. Forecasting short-term weather was a "refined art" for his parents, especially his mother who had an astonishing ability to relate (continued p.2)

her aches and pains from arthritis to possible changes in the weather. With that interest and background, Allen went on to college to prepare for a science teaching career, first at what was then Wisconsin State College-Superior, then at Drake University in Des Moines, Iowa. In 1963, he came to the University of Minnesota as a full-time instructor in the General College (Minneapolis Campus) and as a graduate student in the PhD program in Soil Science (St. Paul Campus). He is presently an Associate Professor of Earth Science in the General College and was a recipient of the H. T. Morse-Alumni Award for Outstanding Contributions to Undergraduate Education at the University. In 1974, Allen completed the PhD. The dissertation, with the guidance of Professor Donald Baker, focused on establishing a climatology for ventilation conditions in the lower 500 feet of atmosphere over the Twin Cities area. This study was based on temperature and wind data continuously collected at selected levels up to 500 feet above street level over a six year period on the KSTP Television tower in the midway area. Ventilation classes based on vertical temperature profiles and wind speed were compared to wind directions throughout different times of the year. In 1965, Allen developed and began teaching an introductory meteorology course as a general education or liberal arts course for freshmen and sophomores in the General College. He continues to teach it at the present time. It was one of the first courses in weather and climate that was available at the University. Much of his approach in teaching weather was shaped during his early years on the farm. Students are taught to sharpen their observation skills and then try to use their observations to determine what is actually going on in the atmosphere and then predict what will happen. They learn the physics of the weather by relating or applying it to what they are familiar with. This science-in-context approach is very helpful to those students who are shy about taking science courses, including those who are considered academically underprepared. Much of Allen's current research focuses on how to help these students use the science courses to improve study skills so that they can move on successfully in their academic work. Allen's association with the local AMS Chapter began in 1964 when the late Joe Strub invited him to participate. Strub had been State Climatologist, MIC of the Twin Cities Forecast Office, and Chief Flood Forecaster. He was a strong advocate of increasing the public awareness about the weather and was very supportive of Allen's development of the introductory meteorology course. Allen has served in all the Twin Cities AMS chapter officer positions and was chapter president four different times.

Comments from Chapter President Dean Braatz

Allen Johnson has informed our Twin Cities Chapter of a need for volunteers to assist with judging at science fairs in the area. One of the best ways for us to support students is to be involved with their projects and show that our profession has a strong interest in their efforts. If we can have an influence on these students that have an interest in the atmospheric sciences and they continue with meteorology studies in college, you will come away with a good feeling. Give some thought to joining Allen and Jonathan in this very rewarding effort. Below is the information that Allen supplied:

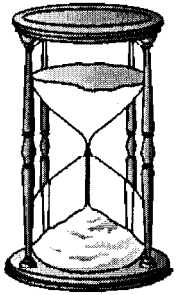
In the past some Chapter members have served as judges of atmospheric and hydrologic-type exhibits at certain regional science fairs and at the state science fair. The Minnesota Academy of Science sponsors these fairs and a complete schedule and location guide can be gotten at www.mnacadsci.org. Science projects produced by 7-12th graders are on display at the fairs for 2 days with the judging being done early in the period. It is fun to just go and see what the kids have done. Those who wish to judge should get in contact with the specific fair director. AMS (Boston) provides certificates of achievement to be given to the regional fair winner(s) of any project involving atmospheric or hydrologic science. The local chapter gives a subscription to "Weatherwise" for state winners. We should discuss this to see if there is a better or more appropriate award that we should give. We have usually had chapter members judge at 2 regionals and at the state fair because so few have volunteered to do it. The regionals this year are: Twin Cities Regional at the Fieldhouse on the University of Minnesota-Minneapolis campus on March 8-9. Jonathan Cohen will probably be able to judge there but others could join him. Jonathan is an experienced judge. We don't have anyone to go to South-Central/Southwest at Mankato State Univ. on March 2nd. The state fair, where the regional winners go, will be in the Twin Cities on April 12-14 at the Hyatt-Regency in Minneapolis. We don't have anyone confirmed for that one. The state fair alternates between the TC Metro and the outstate sites, so this would be a good year to visit or judge at it. I urge you to look at the web site given above and contact me at johns013@umn.edu if you might be interested.

The February meeting will be held at 7pm, on Thursday, February 21 at the National Weather Service Forecast office in Chanhassen..

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.

Twin Cities Weather History- by Tom St. Martin



Early season cold notwithstanding, the distinguishing feature (or, in St. Paul Smithsonian observer Dr. Paterson's words, what "for many years will probably be an era in the climatic history of Minnesota...") of the winter of 1872-73 was a devastating blizzard which swept through much of the Upper Midwest on 7-8 January 1873. The storm struck with little warning early in the afternoon of Tuesday 7 January, a relatively warm day (with a maximum of 30 F at the St. Paul Signal Corps station). According to the 9 January 1873 St. Paul Pioneer, "The storm of wind and snow which set in early on the afternoon of Tuesday, grew gradually worse until shortly after midnight of that day when the wind reached the proportions of a hurricane. The snow continued to fall with the thermometer at zero and the fierce north wind took it up and held high revelry during the balance of the night and all day yesterday [8 January]. The air was full of snow and a man or woman, or an animal even, that could not breathe snow instead of air had no business outside a safe shelter. The night was fearful. From midnight until dawn, the blast went wailing by, heaping up the snowdrifts in every direction, and all day long yesterday the same fierce pitiless wind prevailed. It was almost impossible to make headway against it. The streets were deserted and business was almost entirely suspended. . . .It [the storm] extended over the entire northwest. Not a train of cars left a depot either in Minnesota or Wisconsin. Fortunately nearly all the trains on the different lines...reached a safe shelter before the full fury of the storm broke...But two trains got caught.....The severity of the storm exceeds anything ever known in this state and the day will long be remembered as the most fearful and disagreeable in the recollection...of the oldest inhabitant....".

Although the storm passed relatively quickly, its aftermath continued to be felt for months. Many people, particularly those on the typically open, featureless prairies in recently settled areas of western and northwestern Minnesota, were caught in the open and/or became lost in the "white out" which came on them without "a shadow of warning". The result was extensive loss of life, accounts of which flooded the 11 January 1873 St. Paul Pioneer. Headlines told of "developing horrors" including a party of five found frozen to death near Willmar. Other reports included stories of frozen teams of horses and oxen and the "supposition that their owners shared the same fate...". And, on 18 January, the Pioneer reported the deaths of a father and son whose bodies were found three-fourths of a mile from Fergus Falls. When caught by the blizzard they had left their sleigh, attempting to find help and refuge in town. The wife and mother, who stayed behind in the sleigh, was reported to have survived the ordeal. Finally, as late as 7 March 1873, the St. Paul Pioneer reported that the governor had asked the legislature to provide \$5,000 for "temporary relief for such sufferers from the storm as might stand in need thereof...". The request was prompted by a report prepared by a special governor's commission (which found many blizzard related hardships but which also reported that "casualties were largely confined to the fourteen prairie counties, newly settled and without well defined roads, fences..."). The same report stated that seventy persons had died as a result of the blizzard and that thirty-one others were found to have been "severely injured".