NEWSLETTER

National Weather Association

No. 11 – 3 March 2011

NWS Storm Reports via Twitter

By Winnie Crawford

Thanks to some innovative thinking by Tim Brice, a lead forecaster at the El Paso, Texas National Weather Service (NWS) office, anyone with a Twitter account can tweet about significant weather at their location. While investigating the capabilities of Twitter after setting up his personal account, Brice discovered the ability to attach location information to a tweet and use that information to build a map of tweet content. He got the idea of using this capability for storm reports in the spring of 2009, and by that fall, had assembled a team to look further into Twitter capabilities and develop a program for the NWS. The program came online in April 2010 in a test mode, and is now in full swing. Visit www.weather.gov/stormreports/ for information on this capability. The site is maintained by Corey Pieper, the Techniques Development Meteorologist at Southern Region HQ in Fort Worth, Texas. Corey was also part of Tim's development team, and will answer questions about and take suggestions for the program.

While there are almost 300,000 trained storm spotters across the country (http://www.weather.gov/skywarn/), there are millions of Twitter users that have the potential to provide much needed information where there are no spotters. These reports can be used to modify and/or verify the forecast of events such as heavy snow, tornadoes, high winds and hail. Scott Spratt, the Warning Coordination Meteorologist in the Melbourne, Fla. NWS office, says that the capability to receive real-time reports from remote areas far from other weather observations is exciting. So far, however, most of the tweets have contained subjective information, such as "windy" or "cold," which are not useful

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Inside This Edition

Three Must Read Weather Books

Talk professional development with most people, and it is a pretty vertical conversation. That is, most people think of professional development as gaining a greater depth of understanding and knowledge about their chosen field. But what about the horizontal dimension of professional development? What about breadth of understanding and knowledge that can make you a more valuable employee, as well as a more interesting person?

When meteorologists look past the equations, the gate-to-gate shear, the QPFs, PVA and NWA, what do we see? We see human beings – our customers – who count on us to help keep families safe, and businesses and government agencies humming.

When we look across the desk, who do we see? Another human being with a slightly different variation of the wonderful and annoying qualities that make all of us, well, human! So if we are to be truly effective, both internally and externally, we must consider the human aspect of our work.

The recent movement to bring meteorology and the social sciences together is one manifestation of

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Dust storm approaching Stratford, Texas. [Courtesy of National Oceanic and Atmospheric Administration (NOAA) Photo Library, Historic NWS collection]

36th NWA Annual Meeting
Oct. 15-20, 2011- Birmingham, Alabama
Get Ready! Get Set! Start Planning for a GREAT Meeting!

The End Game - From Research and Technology to Best Forecast and Response

Where: *Wynfrey Hotel,* in Hoover, 10 miles south of downtown Birmingham, Ala.

Our Theme: ***The End Game - From Research and Technology to Best Forecast and Response.*** Being a champion is not easy, in sports or in life. It takes not only a mastery of our chosen field, but also a passion, intensity, energy, focus and commitment that helps us to achieve our very best. It is easy to lose that passion in the day to day routine of our jobs. Weather is unique in that nearly every person can tell you why they got into it. The goal of the 2011 NWA Annual Meeting in Birmingham will be to help us find that original spark and connect to that passion in a fun and spirited environment of learning and networking.

Professional Development Opportunities: The 2011 Annual Meeting will include the Annual Broadcasters' Workshop and DVD swap, and the Fourth Annual Students' Session at the hotel (both on Sunday, Oct. 16). Student presentations will be reviewed by the NWA Weather Analysis and Forecasting Committee members, and monetary awards will be presented to the best presentations and posters in undergraduate and graduate student categories. The general session will be October 17-20, with the annual awards luncheon on Wednesday, Oct. 19.

Abstract Submission: The deadline for submissions of abstracts is June 1, 2011. Abstracts should be sent via the online form on the NWA Web site at: www.nwas.org/2011abstracts.html. Abstracts will be published in the Meeting Agenda as submitted, so please make sure that they have been carefully reviewed and edited before submission. If you are unable to submit your abstract via the online form, please contact the NWA office at (919) 845-1546 or email: exdir@nwas.org. Presenters will be notified regarding the disposition of their abstracts by July 15, 2011.

Annual Meeting Hotel Information: Wynfrey Hotel, 1000 Riverchase Galleria, Birmingham, AL 35244
Telephone: 1-205-987-1600 Website: http://www.wynfrey.com

NWA negotiated room rates are as follows:
Standard Guestroom: $88.00 (Plus $10 for each additional person up to a total of 4 per room)
Concierge Level Guestroom: $128.00 (Plus $10 for each additional person up to a total of 4 per room)
Rooms will be available at the negotiated rate until 9/21/2011 or until the block is full.
Reserve a room by calling 1-800-WYNFREY (1-800-996-3739) by Sept. 1 for the NWA Annual Meeting rate.
Online reservations: The group code for 36th Annual Meeting of the National Weather Association is **1B35Q3**. Go to the Wynfrey website, click "Quick Reservations" on the left side, and enter your information and the group code to make a reservation in the block.

More Information on Birmingham, the Meeting and the Program Planning: Visit the NWA2011 blog, maintained by the Birmingham Program Committee, for information on the event, the agenda, vendors, the hotel and the local area as well as breaking news. Follow the latest on Twitter @NWAS2011BHM. We'll use the hashtag #NWAS2011 this year, so include that in your posts about the event. Use your Twitter accounts to send out information, and re-tweet liberally. A Facebook Event page will be available from the NWA Facebook Page.

The Annual Meeting Program Committee Chair is Jim Stefkovich, Meteorologist in Charge, NOAA/NWSFO, 465 Weathervane Rd., Calera, AL 35040; (205) 664-3010, ext 222; annualmeeting@nwas.org.

Broadcaster Workshop Program Chair: Mike Goldberg, PO Box 2491, Glen Allen, VA 23058-2491; mike@mike-goldberg.com

For more information on exhibits, special accommodations, registration and overall meeting program, go online to www.nwas.org or contact the NWA office at (919) 845-1546 or by emailing: exdir@nwas.org.

Special Feature For The 36th NWA Annual Meeting: A joint meeting will be held with the 7th GOES Users' Conference! The GOES Users' Conference will be held in the Wynfrey Thursday Oct. 20 and Friday Oct. 21 with Thursday being a joint meeting of the two conferences. Thursday, we'll highlight the new operational capabilities to be provided by existing and future GOES satellites; we'll also solicit feedback from attendees regarding current and future needs by those using GOES information. NWA meeting attendees are urged to attend the Friday, Oct. 21 session of the GOES Users Conference. Registration information will be forthcoming.

President's Message: What Is Greatness?

Greatness is overrated. In the last week, I have heard a slice of pizza, a cheeseburger, a set of guitar strings, Abraham Lincoln and Martin Luther all described as "great." That's quite a list of mixed company. To be sure, Abraham Lincoln (abolitionist and statesman) and Martin Luther (father of an entire branch of Christianity) make the list---but alongside pizza? Okay, maybe the term 'greatness' isn't overrated so much as it is overused. So, just what does it mean to be "great"?

I'll spare you the sophomoric reach for a copy of *Merriam-Webster's*, and simply suggest that "greatness" is somewhere close to you, right now. This idea was planted in my mushy young skull when I was a very green graduate student at Saint Louis University. The late Dr. G. V. Rao admonished me (and many others, I have learned) that excellence and greatness are often found in someone at the next desk, or across the hall, and that their hard work and contributions often go overlooked. He went on to explain that we all want to do something important, and we all hope that our own efforts will be noticed and acknowledged. But Dr. Rao finished by pointing out how we tend to get so caught up in our own work and career that we fail to notice the important (and great?) forecasts, broadcasts, research papers, presentations, etc., of others.

As I write this message, nearly a third of the United States is digging out from a historic winter storm. On the national and local newscasts, superlatives abound. It is true that many records have been dashed by this storm. Yet, also dashed were the personal schedules of a legion of operational forecasters, from NWS personnel, to broadcasters, to private industry meteorologists. Birthdays were missed; recitals cancelled; the list is endless. And many of those to whom I refer are our fellow NWA members, dug in on the front lines of this event. You may shrug and say, "That's the job." Call it "The American Way." Maybe. But somewhere out there in that sea of superlatives was someone who went just one step further. Who was that? We'd like to know.

In fact, there are nearly a dozen awards that the NWA presents each year to recognize and honor excellence and, dare I say it, greatness in operational meteorology. Some of those are geared toward specific forecasts, as I alluded to above, and some are dedicated to aviation meteorology and research achievement, to name a few.

So now, kindly take a minute, and have a good, long look around your professional landscape. Who stands out? Who do you know whose accomplishments should be brought to the larger attention of our community? Please have a look at our Awards page (www.nwas.org/awards/) as well as the page for the NWA Awards Committee (www.nwas.org/committees/awards) and take a few minutes to nominate someone who you know is deserving of one of these awards. Thank you!

Patrick Market
NWA President

Second National Flood Workshop

February 27 – March 1, 2012, Houston, Texas

The Second National Flood Workshop is organized by Weather Research Center (a private, non-profit educational and research center based in Houston, Texas) and its partners. The purpose of this workshop is to bring together various agencies, emergency managers, academia, and professionals from across the nation to encourage dialogue on the various aspects of flooding. This includes the meteorological and hydrological conditions before, during, and after flood events, technological advancements being made in remote data acquisition, flood modeling, and regulations and requirements in flood mitigation and floodplain management. Coastal and offshore operations are also impacted by flood events especially storm surge and high tides from tropical storm and hurricane events which can cause flooding and damage. This year's conference will add a track where coastal and offshore facilities affected by tropical storm and hurricane events can come together and discuss flooding impacts on their operations.

The goal is to establish a forum to discuss flooding topics, provide education and training, and most importantly to help reduce loss of life and property damage from floods.

Call for Papers:

Abstracts are being sought for oral presentations and posters covering a wide range of topics. All conference presenters are required to pay the appropriate conference registration fee. Abstracts should include the following:

- Name, title, affiliation, full mailing address, email address, phone and fax numbers of the main contact and the presenting author
- Name, affiliation and email address of co-authors
- Type of presentation (oral, poster, either)
- Abstract Title
- Abstract with 350 words or less - NO GRAPHICS

For more about the workshop including additional parameters for abstracts, visit www.nationalfloodworkshop.net, call Weather Research Center at (713) 539-3076 or email wrc@wxresearch.org.

Abstracts must be submitted by Aug. 15

To be considered for placement in the program,
submit to wrc@wxresearch.org or
upload to www.wxresearch.com/nfw/call.html

The Importance of Considering Snow to Liquid Ratio during the Forecast Process
February 12-13, 2010 Snowstorm

During the active 2009-2010 winter season across the Mid-Atlantic and Southeast, a significant snowstorm impacted central South Carolina on the afternoon and evening of February 12, 2010. Moderate to heavy snow blanketed the NWS Columbia forecast area over a six-hour period, resulting in snow totals ranging from 4 to 9 inches (Figure 1). At Columbia Metropolitan Airport 8.6 inches of snow fell, which was the highest snow total in almost 40 years and the sixth highest recorded snowfall since 1878. At Augusta Bush Field 8 inches of snow fell, which was the third highest recorded snowfall since 1871.

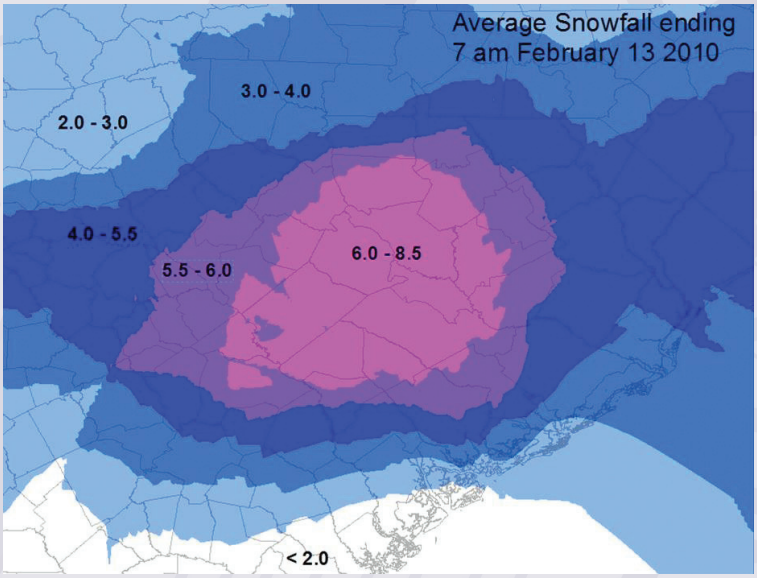

Fig. 1: Average snowfall for the event ending at 7 a.m. EST February 13, 2010, based on cooperative observer, spotter, media and public reports.

Forecasting the location, amount, and areal extent of frozen, freezing and liquid precipitation is an extremely challenging task. This paper describes a method to help identify snowfall amounts from variables every forecaster has access to. This article has been requested as part of a series of professional development articles highlighting important work presented orally or via poster at the 35th NWA Annual Meeting. I hope this piece challenges you to continually find ways to enhance what many of you are already doing - providing outstanding operational weather support to your customers!

Kenneth Carey
Chair, NWA Professional Development Committee

The synoptic pattern that resulted in this heavy snow event featured an upper low tracking across the Gulf Coast states, which then lifted northeastward across the Carolinas and off the Mid-Atlantic Coast. A surface low tracked across the northern Gulf of Mexico and north central Florida, then deepened and lifted northeastward off the Southeast Coast. This storm track is highly favorable for significant snow over central South Carolina.

The snow to liquid ratio (SLR) is an important parameter to evaluate when forecasting winter weather, especially if a single precipitation phase snow event is expected. An analysis of SLR for snow events greater than 3 inches at Columbia Metropolitan Airport showed high variability with SLRs ranging from 5:1 to 23:1. The SLR for the February 12-13, 2010, event was 20:1, nearly three times the average SLR.

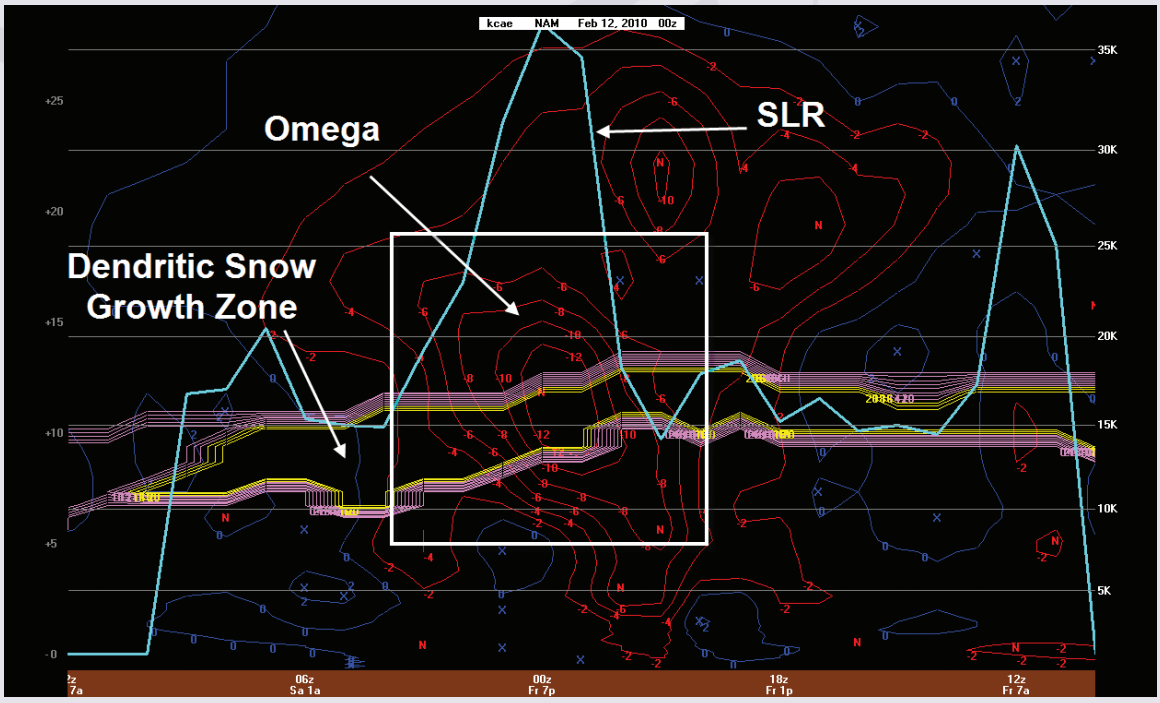

Fig 2: NAM 0000 UTC February 12, 2010, forecast time-height cross section at Columbia Metropolitan Airport. Red contours represent upward vertical motion (μb/s), purple contours represent the snow growth zone (-12°C to -20°C) and yellow contours represent the area within the snow growth zone where RH is greater than 70 percent. The light blue line denotes the model forecast SLR.

In order to properly assess the SLR, an understanding of snow microphysics is needed. The activation of ice nuclei at temperatures colder than -8°C is important for snow crystal growth. The optimum snow growth region (also known as the snow growth zone) is between -12°C and -20°C where the primary crystal type is dendritic plates, which have a porous lacy structure and are associated with higher SLRs. It has been shown (Byers 1965) that snow growth rates are maximized around -15°C, where the growth of dendritic

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crystals is enhanced, contributing to higher SLRs.

Operational forecasters can qualitatively assess the SLR when evaluating model data by looking for the "Crosshair Signature" (Waldstreicher 2001). This signature is defined by the intersection of a region of upward vertical motion > 10 microbars/second (0.01 mb/s), the snow growth zone (the layer between -12°C and -20°C), and relative humidity values greater than 75 percent. Time-height cross sections of model forecast data showed this "Crosshair Signature" occurred at Columbia for several hours during the evening of Friday February 12, 2010 (Figure 2). Saturated atmospheric conditions from the surface up through 20,000 ft combined with the co-location of the snow growth zone and upward vertical motion between 7 p.m. and 11 p.m. EST (0000 to 0400 UTC February 13, 2010) resulted in observed snow accumulations of 1 to 2 inches per hour.

The February 12-13, 2010 snowstorm was unique for NWS Columbia because it provided the 6th highest snow total on record and the second highest observed SLR of 20:1. Model forecasts of snow accumulation and SLR for this event were quite accurate, but the official snow accumulation forecasts were underdone. Model forecast SLRs were believed to be overdone and not strongly considered for this event, but if followed could have provided a better forecast of snow totals. Placing more emphasis on evaluating the SLR during snow events should be considered to better anticipate potential heavy snow events.

Hunter Coleman
Meteorologist
NWS Columbia, S.C.

Byers, HR, 1965: Elements of Cloud Physics. University of Chicago Press, 191 pp.

Waldstreicher, J.S., 2001: The Importance of Snow Microphysics for Large Snowfall, Third Northeast Operational Workshop, Albany, NY, NOAA/NWS, [available at www.erh.noaa.gov/er/hq/ssd/snowmicro]

Editor's note: The slide show from Hunter's presentation at the 2010 Annual Meeting can be downloaded at www.nwas.org/meetings/nwa2010/.

Seven Educators Receive NWA Education Grants

By Eleanor Vallier-Talbot, Co-Chair, NWA Education Committee

Thanks to the continued generosity of the NWA membership, seven NWA Sol Hirsch Education Fund Grants were awarded during the fall and winter of 2010.

Two major changes were introduced to the grant program in 2010. First, the application process moved entirely online, the first NWA award to do so. Then, thanks to the approval of the NWA Council, the award amounts increased for the first time since the grant's inception in 1993. The grants are now up to $750 each for up to seven recipients.

The Sol Hirsch Education Grant award ceremony at KTVQ-TV in Billings, Mont. Bob McGuire (left), a long time NWA member, presented the check at the beginning of the newscast on December 14, 2010. From left to right: McGuire, Craig Beals (lead grant writer) from Billings High School and Patrick McNelly from the Montana Learning Center.

These important changes caused a huge response from the education community. Nearly 500 applications were started by educators throughout the United States and several foreign countries, and 150 applications were completed. This meant a lot of reading by NWA Education Committee members. The "cream" rose to the top, with seven educators from New York, N.Y., to Billings, Mont., to Jacksonville, Fla., selected for the Sol Hirsch Grants.

Projects funded include:

- A school-wide weather curriculum for special education students to become "Weather Wizards" in Laquey, Mo.,
- A new weather curriculum and research program using real-time data from a weather station at Billings High School, that is shared statewide, as well as science, math, ecology and natural science Discovery Summer Camps through the Montana Learning Center in Billings and Helena, Mont., and
- The "Beaches Academy of Sciences" to be developed by several middle schools and a high school in northeastern Florida for studying air quality and atmospheric chemistry in their communities and fostering interest to pursue science careers.

Ironically, Jacksonville has been the "capital" of the NWA Education Grant recipients, having three schools receive grants in 2005, 2009 and 2010. Twelve schools in Florida have had projects funded since the grant program was introduced, by far the highest since 1993. Eight projects have been funded in North Carolina, including a recipient in Winterville in 2010.

Another first for the Education Grant program involved asking NWA members to present the grants in-person to the recipients. The Education Committee contacted members in the areas where the grants were awarded. All were eager to help, setting up the local award ceremonies. This included an on-camera presentation thanks to NWA member Bob McGuire, meteorologist at KTVQ-TV in Billings, Mont. Members that participated include Jeff Tongue, Renee Fair and the local NWA chapter in Little Rock, Ark., Bob McGuire, John Gagan, Jim Merrell, Dan McCarthy and Dr. Richard Snow. The NWA Education Committee thanks those that participated in making this a special event for the schools.

See www.nwas.org/grants/solhirsch.php for a list of 2010 recipients and the 2011 grant application. 2011 applications are due by June 1.

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this important concept, and it is already bearing fruit. Another way to increase your understanding and appreciation of this part of our work – without ever leaving the comfort of your favorite chair – is to read three captivating books that take us right to the front lines where humans and the atmosphere meet.

As you might imagine, these books do not chronicle happy meetings between humans and the atmosphere. Unfortunately, these compelling stories arise when the powerful forces of weather are at their worst and people are in the way. So, I will warn you that sometimes it is hard to read these books as the sense of human loss is at times overpowering. For example, few parents will be able to read David Laskin's The Children's Blizzard without being deeply affected by the terrible loss.

The Children's Blizzard of 1888 is so named because of the number of children caught and killed by the swift onslaught of the storm. In our day of rapid-update satellite imagery, a nationwide network of Doppler radars and mesonets, it is hard to imagine a world where such a huge and devastating weather system could catch so many people completely unprepared. But Laskin weaves a spell-binding tale of a January thaw so pronounced that many Plains children actually went to school without coats. By the end of the school day, the blizzard roared in, and 500 people died. Laskin does a marvelous job of recreating the state of weather science, the prevailing notions of the day, the monster storm and its terrible human cost.

As horrible as this story is, it is dwarfed in scale by the greatest weather disaster in U.S. history: the Galveston hurricane of 1900. In Isaac's Storm, author Erik Larson centers his story on Isaac Cline, the U.S. Weather Bureau's meteorologist in Galveston. Larson masterfully recreates the bustling Galveston of the day, the fatally flawed understanding of tropical weather, and the hubris that blinded those responsible to the danger until it was far too late. Larson's breath-taking recreation of the meteorological event is interwoven with moving stories of the people who paid the price, including Cline himself. No, Cline did not die. Some would say he suffered a far worse fate, for many long years.

From the wall of water and wind that devastated Galveston, we turn to a completely opposite tale of man running afoul of nature. What The Worst Hard Time lacks in water, it makes up for in heat, drought, dust, grasshoppers and numbing heartbreak. Timothy Egan brings the Dust Bowl to life with intimate accounts of those who watched their dreams being swept away by searing drought and unrelenting wind. But more than that, Egan

The great Galveston hurricane roared through the prosperous island city with winds in excess of 130 miles per hour and a 15-foot storm surge. When it was finally over, at least 3,500 homes and buildings were destroyed and more than 8,000 people were killed.

(http://celebrating200years.noaa.gov/magazine/galv_hurricane/Galveston19001.html)

documents the vast transformation of the land that set the stage for an ecological disaster. He introduces us to people whose very existence was directly connected to land and weather, but who were tragically betrayed by their ignorance of both. The Dust Bowl is part of our national heritage-especially for those of us who live where it happened. But Egan's tale brings it home and makes it human.

The weather conditions in each of these stories differ, but common themes emerge. Each story reinforces how much we did not, and still do not, know about the atmosphere. This is a lesson that serves us well. It keeps us asking questions, probing, learning, improving. The hubris that runs through each of these tales should make us feel uncomfortable, and motivate us to stay in a learning mode throughout our careers. Finally, each of these authors has brought what we do down to the most basic and important level: we do what we do so that stories like these can have different and better endings.

Dave Freeman, Chief Meteorologist
KSN WeatherLab, KSNW TV, Wichita, KS
Professional Development Committee

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for operations. When more objective observations are received, such as specific temperatures or wind speeds, they may explore ingesting them into their local mesoscale analysis systems. So, any objective information and pictures you can provide for significant weather events will help the NWS forecasters analyze current weather and make better forecasts.

This information is not only available to the NWS, but also to local television stations and other weather partners. Individuals can also access the tweets and put the information on a map (e.g., http://mybrowncouch.com/codenoobs/examples/monitter/). This is one of the powerful elements of the tweets with geo-tag information: anyone can access the tweets and create similar maps. Setting up a Twitter account is free (www.twitter.com), but standard text message rates apply if you use your cell phone.

Taking the Mystery Out of the NWA Awards

By the time you read this newsletter, the 83rd Annual Academy Awards — that recognized superior achievements within the film industry — will be a distant memory. A range of emotions surround this event: from jubilation to disappointment to sometimes even anger. Some adoring fans will wonder how one nominee could have been selected over another. It seems the award process is always surrounded by some degree of mystery.

Several months from now during the week of Oct. 15-20, the National Weather Association will hold its 36th Annual Meeting in Birmingham, Ala. On Wednesday of that week, we will hold our Awards Luncheon recognizing the outstanding achievements of individuals and groups involved in operational activities. The purpose of this article is to remove any mystery from our awards process, as well as promote them and encourage participation.

NWA Award nominations begin in March and continue through July 1. There are 11 award categories and several special awards. Beginning with last year, the award nomination process is on-line through a link on the Awards Program page (http://www.nwas.org/awards/). Once a nomination is submitted, it remains valid up to three years. How does this work? If the nomination is not selected as the winner, it will remain eligible for two additional years unless the nominee(s) are no longer in positions applicable to the award (e.g., a Broadcaster of the Year Award nominee is no longer in broadcasting). The nomination package or information may also be updated by the submitter/sponsor in each of those additional two years.

So what happens after July 1? All of the new award nominations and those still valid from previous years are evaluated by the Awards Committee. The Committee is comprised of 12 members; each subjectively evaluates the nominations within the respective award category using a grading system of whole numbers from 1 to 4, where "1" represents a commendable achievement and "4" is indicative of a distinguishable or unique achievement. The nomination with the highest cumulative score within their award category is deemed the winner.

A good award nomination package includes the following:

1) A concise description of the achievement, with specific information and detail on the work and its impacts,

2) Information explaining how the nominated work or achievement is unique or groundbreaking, or has a significant impact,

3) Justification that the nominated work goes above and beyond normal duties,

4) Two or three supporting letters of recommendation, especially from those impacted by the work, and

5) Confirmation that the research and scientific achievements are sound and have an impact in operations.

The work and accomplishments of all the award nominees in 2010 was amazing. It is a testament to the passion and dedication of those within our community. Presenting awards to the very deserving winners last October in Tucson was truly a gratifying and memorable experience. I encourage you to follow the words of NWA President Pat Market by taking a few minutes and nominating someone or a group worthy of our recognition.

Fred Glass
NWA Awards Committee Chair

NWA Sponsored Annual Meetings/ Conferences

Aug. 4-6: 15th Annual High Plains Conference
This annual conference sponsored by both the Wichita and High Plains Chapters of the AMS/ NWA. It will be at the Wichita Marriott in Wichita, Kan. www.wichita-amsnwa.org.

Oct. 15-20: 36th National Weather Association Annual Meeting
It will be held at the Wynfrey Hotel in Birmingham, Ala. See page 2 and www.nwas.org for more.

Oct. 20-21: 7th GOES Users' Conference
This conference will be held in the Wynfrey Hotel in Birmingham, Ala., with the first day being a joint meeting with the 36th Annual NWA Meeting. Details coming soon.

Feb. 27 –March 1, 2012: 2nd National Flood Workshop
Organized by Weather Research Center (private, non-profit education and research center) in Houston Texas. See page 3 and www.nationalfloodworkshop.net for more.

Other Meetings & Conferences

April 4-8: NOAA Satellite Direct Readout Conference
The NOAA National Environmental Satellite, Data and Information Service (NESDIS) will be hosting this Conference in Miami, Fla. The conference is the follow-up to NOAA's successful 2008 Direct Readout Conference. The Theme of the 2011 conference is, "Real-Time Access for Real-Time Applications." Details at: http://directreadout.noaa.gov.

April 18-22: 2011 National Hurricane Conference
This annual conference will be in Atlanta, Ga. www.hurricanemeeting.com.

June 18: 2nd Annual Raleigh StormFest
The North Carolina Museum of Natural Sciences will host this large public outdoor event in Raleigh, N.C. Details coming soon.

Oct. 3-5: Ice and Freezing Fog Workshop
Environment Canada will host a workshop on ice and freezing fog in St. John's, Newfoundland, Canada. http://collaboration.cmc.ec.gc.ca/science/arma/FRAM 2.

Daniel Brouillette Awarded the 2010 NWA Arthur C. Pike Meteorology Scholarship

Daniel Brouillette, a junior at Northern Illinois University (NIU) from Geneva, Ill., is awarded the 2010 NWA Author C. Pike Meteorology Scholarship.

He is a top performing student who has already demonstrated a focused view for his future. In this world of concern regarding the climate which it is being undertaken in, at times, a very contentious atmosphere, Brouillette has focused on a basic aspect of the discussion, i.e., observations. Without good observational data, any climate change discussion or position can be flawed. In 2008, he became an observer for the NWS CoCoRaHS Network of citizen weather observers. This program is providing a vital service to the country by increasing the number of high quality weather observations for the climate record. As a sophomore (usually a position for a senior), he was selected by the faculty to become the co-Weather/Climate Director for NIU's on-campus NWS cooperative weather station. This required the preparation of monthly data summaries (termed "eloquent" by one of his professors), taking 7 a.m. observations and responding to public inquiries.

Brouillette is an outstanding student who is carrying an overall GPA of 4.00. He participated in an honors project in which he performed original research on 60-year temporal trends and inter-annual variability in extreme dew-point occurrence in Illinois. His results received very high praise, especially concerning his professionalism and writing style. He has been the recipient of numerous scholarships and awards and is viewed by the faculty as having an extremely bright future in the profession.

The NWA Education Committee extends best wishes and good luck to Brouillette and all the individuals who applied.

Dates 2 Remember

April 4-8: NOAA Satellite Direct Readout Conference, Miami, Fla.

April 15: Deadline for receiving applications for Sankey Scholarship

April 14-18: National Hurricane Conference, Atlanta, Ga.

May 15: Deadline for receiving applications for AccuWeather and Rod Scofield Scholarships

June 19-25: Lightning Safety Awareness Week

Aug. 4-6: 15th Annual High Plains Conference, Wichita, Kan.

Oct. 16-20: 36th National Weather Association Annual Meeting, Birmingham, Ala.

Oct. 20-21: 7th GOES Users' Conference, Birmingham, Ala.

See page 7 for additional opporunities and meetings.

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Submit newsletter items directly to the NWA office or to nwanewsletter@nwas.org. Material received by the 25th will be considered for the next month's issue.

Members receive the Newsletter and *National Weather Digest* as part of their regular, student or corporate membership privileges. Printed Newsletter subscriptions are available for $25 per year plus extra shipping costs outside U.S. Single copies are $3. **Address, phone number, email and affiliation changes can now be made online: member.nwas.org.**

Connecting operational meteorologists in pursuit of excellence in weather forecasting, communication, and service.

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