

NEWSLETTER

National Weather Association

NO. 07 – 09 SEPTEMBER 2007



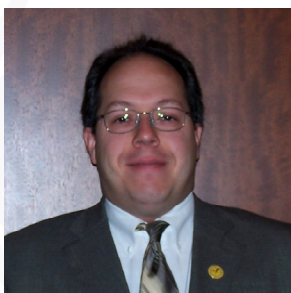
Life is full color

And now the NWA Newsletter is, too!



President's September '07 Message

This month marks an important milestone in the growth of our organization. Membership surveys have consistently shown that the Newsletter is the main venue by which the members and other people in the community remain informed regarding happenings in the association. Now, for the first time in well over a decade, the Newsletter has undergone a significant format change, one involving increased use of color and graphics. The Council and staff feel that this is a long overdue change and, we hope you agree, a significant improvement to the NWA's most prominent publication.



This change was not made easily or quickly. Much of the impetus for this change came out of the Publications Committee, currently chaired by Rodger Brown, which was formed by the Council several years ago to look at how to modernize our publications. It has taken all of this time for the committee, working with our staff, to develop this new concept and line up the resources needed to make it happen. The results of this hard work are what you see before you today.

As Executive Director Steve Harned mentions on page 8, this change to the News-

letter is not the only major change the NWA publications are going through. By the end of the year, the association will publish its first full color, glossy version of the *National Weather Digest*. Obviously, changes such as this do not only require hard work, they require a financial investment as well. However, as computer and printing technology has evolved in the

past several years, the cost of making changes such as these has come down tremendously. We hope you agree that the benefits of modernizing our publications are well worth the relatively small increase in cost to the organization.

I strongly believe that for an association such as ours, on-time, up to date publications are one of the absolute highest priorities. It is these publications by which the members remain informed about the organization and latest news in the profession, and by which potential members become introduced to us. My primary goal during this year of serving as President was to hopefully bring the projects to modernize the Newsletter, *Digest*, and Web page to fruition, and to also set up an infrastructure by which the timely publication

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✓ CHECK THAT YOU'RE READY!

**THE 32ND ANNUAL
NWA MEETING
RENO, NEVADA**

OCT. 13 - 18

**DETAILS AND A
REGISTRATION FORM ARE
ON PAGES 6 - 7**

Continued page 6

NWA METEOROLOGY SCHOLARSHIPS

Ava Dinges Awarded the AccuWeather, Inc. Undergraduate Scholarship in Meteorology

Ava Dinges of Denver, Colo., and a junior at the University of Kansas received the 2007 AccuWeather, Inc. Undergraduate Scholarship in Meteorology.

An academic standout with a 4.0 overall GPA, Ava has also proven herself to be a leader among her peers. She has been recognized by the faculty as one of the Department of Geography's (Atmospheric Sciences discipline) top undergraduate students. Professors note that she is very motivated with a serious and excited attitude toward learning. Not limiting herself to just meteorology, she's becoming fluent in Spanish and adding a journalism emphasis to her scientific degree. She wishes to use excellent communications skills to share her knowledge of meteorology with others.



A proven leader, Ava was chosen as a sophomore by the university to be a resident assistant (RA) working with high ability students – a role she will continue this year. She has been active in the local American Meteorological Society chapter and serves as a weather anchor for KUJH-TV, the university's television station.

Of note to NWA members, Ava possesses a strong desire to concentrate on operational meteorology since, as she says, "out of all the types of meteorology, it is the most applicable to society." She looks forward to the day when she can use her enthusiasm for meteorology to make a positive impact on society.

The NWA Education Committee sends its best wishes to each of the outstanding applicants who applied – 43 individuals from 26 universities across the country. Congratulations to Ava Dinges!

Michael E. Kurz Awarded the First Dr. Roderick A. Scofield Scholarship in Meteorology

Michael E. Kurz of West Allis, Wis., is a first-year graduate student at the University of Wisconsin-Milwaukee. He received the first Dr. Roderick A. Scofield Scholarship in Meteorology.

Michael is an outstanding academic performer who earned an undergraduate GPA of 3.945. One of his professors who has been associated with the university for 13 years says Michael, "... is the best student that I have seen here in that time." Another professor remarked that "Mike is one of the very best students I have encountered in my 17 years at UW-Milwaukee."

Michael has demonstrated a strong initiative to immerse himself in the real world of operational meteorology. Right after high school, he became an intern working with the chief meteorologist for WTMJ-TV in Milwaukee. Friday nights, he still reports to the station to answer phone calls from weather observers, analyze weather maps, deliver forecasts to radio stations and prepare graphics for television presentations.



Since his main interest in meteorology has always been operational forecasting, Michael has undergone severe storm spotter training and is active in the UW-Milwaukee Atmospheric Science Club. With other members of the club, he has storm

chased in the Midwest and was rewarded last year when they "caught a tornado" in Indiana.

Michael is gaining additional experience as an operational forecaster with a new UW-Milwaukee weather forecasting company. The company provides service oriented forecasts to clients such as energy companies and trucking firms. As the company was being organized, the leaders were looking for mature and polished operational forecasters. Michael was the first student selected for a paid lead forecaster position.

Michael is preparing for a career in operational meteorology once he obtains his master's degree. He certainly is well on his way!

The NWA Education Committee received 30 applications from outstanding students at 19 universities from across the country for this annual scholarship award. Best Wishes to all individuals who applied! Congratulations to Michael Kurz!

Professional Development Opportunities

- **2007 NWA Annual Meeting: Oct. 13 - 18**

The 32nd National Weather Association Annual Meeting will be held Oct. 13-18 at Circus Circus–Reno in Reno, Nev. Preregistration information and other details are on pages 6 - 7 or visit the NWA Web site (www.nwas.org).

- **Annual Southern New England Weather Conference: Oct. 27**

The eighth Annual Southern New England Weather Conference will be held Oct. 27 at the Clay Center for Science and Technology at the Dexter/Southfield Schools in Brookline, Mass. The conference is co-sponsored by the National Oceanic and Atmospheric Administration/National Weather Service Forecast Office-Taunton, MA, the Blue Hill Observatory Science Center, the NWA Southern New England Chapter, the Greater Boston Chapter of the American Meteorological Society, and the University of Massachusetts-Lowell Student Chapter of the AMS. Presentation titles include *NOAA/NWS Spaceflight Meteorology Group Operations*, *Southern New England Tornado Climatology* and *A Fight for Survival in the Blizzard of 1978*. The agenda and registration details are online at www.sneweatherconf.org.

- **AMS Annual Meeting: January 2008**

The 88th AMS Annual Meeting will be Jan. 20-24, 2008, at the Ernest N. Morial Convention Center in New Orleans, La. Meeting information is located on the Web site (www.ametsoc.org/meet/annual/index.html). During the meeting, the NWA will co-sponsor a number of the conferences and the first Industrial Meteorology and Certified Consulting Meteorologist Colloquium.



River tug in New Orleans

- **GOES Users' Conference: January 2008**

The fifth Geostationary Operational Environmental Satellite Users' Conference will be Jan. 23-24, 2008, as part of the 88th AMS Annual Meeting in New Orleans, La. The conference is co-organized by the NOAA and the AMS, with support from the NWA. Objectives are to seek ways/define methodologies to ensure user readiness; continue to improve communication between NOAA and the GOES user communities; inform users on the status of the GOES-R constellation, instruments, and operations; and promote understanding for the various applications of data and products from the GOES-R series. The conference will consist of speaker presentations, poster sessions and an opportunity for user feedback.

GOES-R, slated to be launch-ready in late 2014, will provide critical atmospheric, oceanic, climatic, solar and space data. These new satellites will provide the user community (television meteorologists, private weather companies, aviation and agriculture communities, and national and international government agencies) with significantly more data, containing noteworthy improvements in temporal and spatial resolutions over data currently provided. For additional information, please contact the program committee co-chair, Dick Reynolds at NOAA/National Environmental Satellite, Data, & Information Service, (410) 268-5630 or Dick.Reynolds@noaa.gov.

- **National Storm Conference: March 2008**

The National Storm Conference — a collaboration between the Texas Severe Storms Association (TESSA) and the NOAA/National Weather Service in Fort Worth — will be March 8, 2008, at the Colleyville Center in Colleyville, Texas. Speakers will deliver presentations on severe weather safety, storm spotter training and in-depth discussions on supercell and tornado meteorology. See the TESSA Web site at www.tessa.org for more information.



Summer thunderstorm in N.C.

- **Northeastern Storm Conference: March 2008**

The 33rd Annual Northeastern Storm Conference will be March 14-16, 2008, in Springfield, Mass. It is sponsored by the Lyndon State College Student Chapter of the AMS and NWA. Monitor the following Web site for more: apollo.lsc.vsc.edu/ams/index.html.

- **2008 NWA Annual Meeting: October 2008**

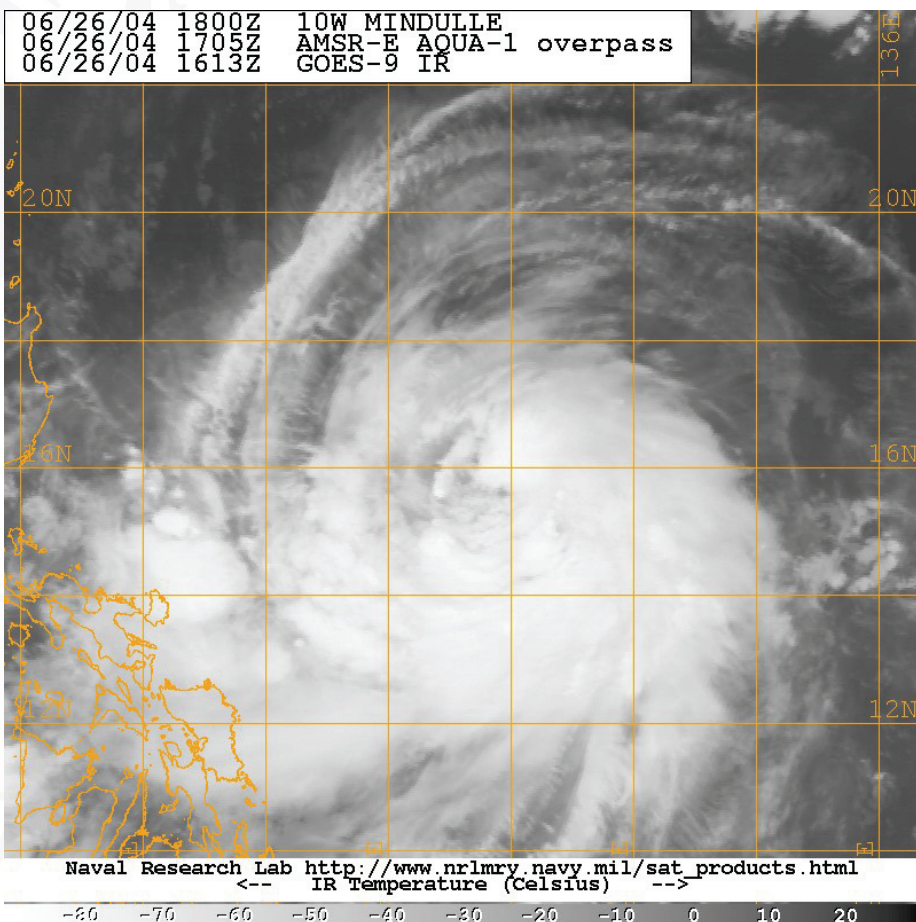
The 33rd NWA Annual Meeting will be Oct. 11-16, 2008, at the Galt House Hotel and Suites (www.galthouse.com) on the waterfront in Louisville, Ky. Details will be posted at www.nwas.org as they are finalized.

Near-real-time Remote Sensing of Tropical Cyclones on the Web

Due to the lack of near-surface reports, satellites are used extensively to diagnose and forecast position and strength of tropical cyclones over the oceans. The primary tool for tropical cyclone forecasters is imagery from geostationary satellites. Animated visible and infrared imagery is routinely used to provide position estimates and monitor intensity trends. Water vapor imagery on such platforms also provides information on the upper-level atmospheric winds, vertical motion evolution and mid-level moisture. Automated techniques have been developed to use the geostationary imagery to produce cloud and feature track winds that are used to better initialize numerical weather prediction models and provide critical information on the vertical distribution of the wind field surrounding and interacting with tropical cyclones. Agencies all over the world use the Dvorak technique (developed in 1974 and updated in 1984 by Vern Dvorak) that provides intensity estimates and trend based on such visible and infrared satellite images.

Forecasters have also relied increasingly on passive microwave products and imagery from polar-orbiting satellites. Microwave-based products include: total precipitable water, which provides a good measure of the atmospheric moisture content around storms; rain rate; and ocean surface wind speed estimates. Microwave images from polar-orbiting satellites result in more precise tropical cyclone reconnaissance. Microwave imagery sometimes reveals features not seen in animated infrared and visible imagery, thus providing additional information that in turn creates better estimates of intensity and position. The left image shows a GOES (Geostationary Operational Environmental Satellite) infrared image of Tropical Storm Mindulle. Unfortunately, the inner core is cirrus-covered, and little low-level storm structure appears. However, the geostationary perspective allows for time animations. In addition, although the GOES water vapor shows only the cold tops near the storm center, GOES water vapor data can be valuable in showing the interaction with dry air surrounding the storm which can eventually weaken it if absorbed into the circulation. The right image shows the corresponding Advanced Microwave Scanning Radiometer-EOS (AMSR-E) (89 GHz) image, revealing a large storm eye and allowing the analyst much improved inferences of center position and intensity.

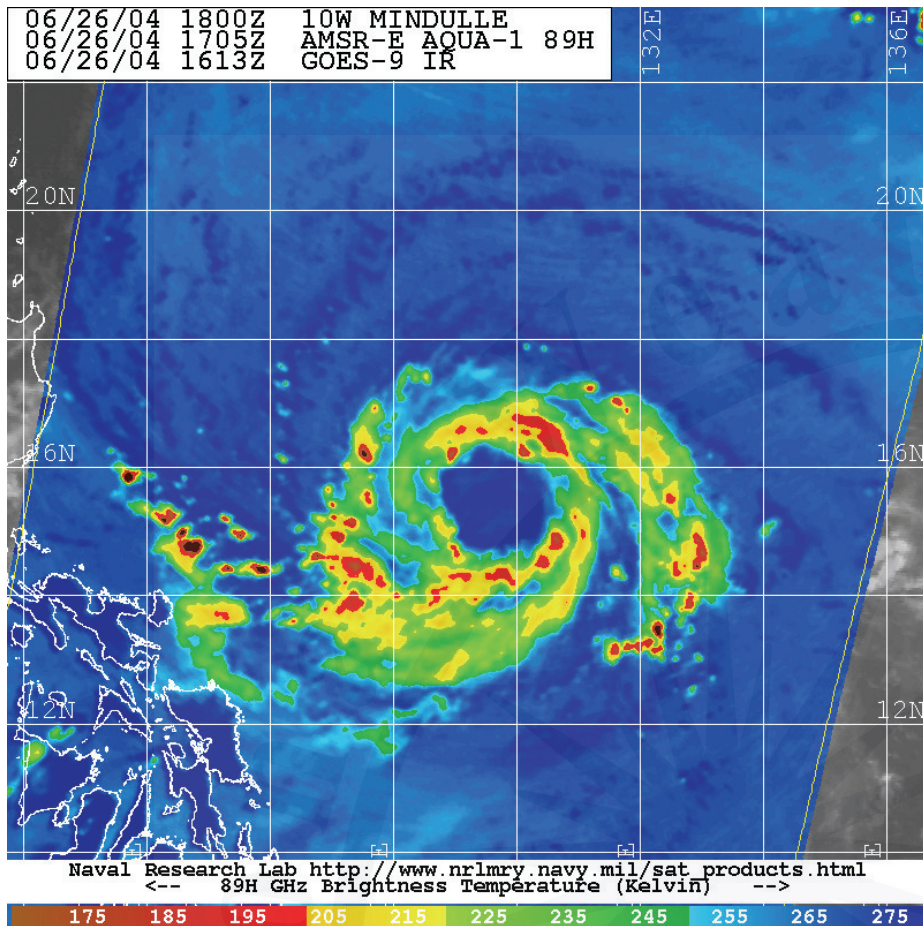
This is just one illustration of the advantages of passive microwave data. Passive microwave sounders are also used to provide intensity-based magnitude of satellite-derived warm core structure that are both complementary and independent of estimates made using the Dvorak technique. In addition to intensity estimates, microwave sounders also provide the three-dimensional structure of the tropical cyclone, albeit at the horizontal resolution of ~80 km. These sounder-derived depictions provide infor-



mation about the thermal structure or cyclone phase associated with tropical cyclones. Advanced versions of the objective Dvorak technique (under development) are incorporating microwave observations in the intensity estimates.

Passive microwave measurements from the Special Sensor Microwave Imager (SSM/I) on the Defense Meteorological Satellite Program (DMSP) spacecraft have been used over the last two decades to map ocean surface wind speed. These data are vital to forecasters for positioning and determining the intensity of tropical cyclones, especially in the Pacific Ocean where there is no operational aircraft reconnaissance capability. More recently, passive microwave polarimetric measurements made by the WindSat instrument on the Coriolis spacecraft successfully mapped ocean surface wind vectors (speed and direction). The WindSat data are currently being evaluated for use in operational forecasting.

Active microwave instruments on low earth orbiting satellites also provide forecasters information about the ocean surface wind field and the heat content of the ocean. Scatterometry (i.e., active radar) provides ocean surface vector winds. Currently two such instruments are providing real-time data for forecasters: the National Aeronautics and Space Administration's (NASA) SeaWinds instrument on the QuikSCAT spacecraft and the European Space Agency's Advanced Scatterometer (ASCAT) on



the European Organisation for the Exploitation of Meteorological Satellites (EU-METSAT) Meteorological Operational (MetOp-1) satellite. In addition to the ocean surface vector winds, space-based active microwave radar instruments provide altimetric measurements that are used to estimate oceanic heat content, which has been shown to be related to intensification of tropical cyclones.

Finally, one must not forget the importance of measurements from land-based radars and reconnaissance aircraft that provide detailed information on the location, rain rate wind speeds and structure of tropical cyclones as they make landfall. In the United States Doppler radar provides continuous coverage of coastal areas including Guam and Puerto Rico. There are a variety of satellite (and some radar) Web sites providing near-real-time tropical cyclone support. One of the many options is the National Hurricane Center Satellite/Radar page located online at www.nhc.noaa.gov/satellite.shtml. This site provides GOES East/West images and loops of tropical cyclones; TRMM TMI and DMSP SSM/I(S) microwave imagery; and links to Doppler Radar sites. A list of other operational and research resources is available on the Remote Sensing Web site.

The committee extends their gratitude to John Knaff and Tim Schmit, NOAA/NESDIS Center for Satellite Applications and Research, and to Chris Velden, University of Wisconsin at Madison, for their review and contributions to this article. This and other remote sensing education and training articles can be found on the NWA Remote Sensing Committee Web site, www.nwas.org/committees/rs/train.html.

Remote Sensing Committee

Retired Air Force Brigadier General **Jack Kelly, Jr.**, National Oceanic and Atmospheric Administration Deputy Under Secretary for Oceans and Atmosphere and longtime National Weather Association member, retired from government service on Sept. 14.



In 1998, after a distinguished career in the U.S. Air Force, Jack joined NOAA as Director of the National Weather Service. For five years, he successfully completed the modernization of the NWS, changing not only its technology, but also its culture, organizational approach and nationwide footprint. In early 2004, Jack started serving as NOAA's Deputy Under Secretary or Chief Operating Officer. During his tenure, he focused on improving program development and execution across NOAA. Jack also served as the United States Principal Representative with the World Meteorology Organization.

Jack and his wife Brenda are moving to Fort Mill, S.C., to be closer to their family. The NWA wishes Jack the greatest enjoyment in all future endeavors and thank him for his continued strong support of the NWA and its objectives.

Christopher Strong has accepted the Warning Coordination Meteorologist position at the NWS Forecast Office in Sterling, Va. Prior to his promotion, Chris held a Senior Forecaster position at the Sterling office. A native of Annapolis, Md., Chris received his B.S. in Meteorology from Penn State, and started his career in meteorology as a student intern at the NWS Forecast Office in Buffalo, N.Y.

In addition to working for the NWS over the past 15 years, Chris also spent some time as a substitute anchor for the *AM Weather* show on Public Television. He has been a member of the NWA since 1994.

THE NWA 32ND ANNUAL MEETING - RENO, NEVADA

OCTOBER 13 - 18, 2007

BUILDING THE BRIDGE FROM THE BEST FORECAST TO BEST RESPONSE



OVER 170 PRESENTATIONS
AND POSTERS!

NATIONALLY RECOGNIZED
BROADCAST METEOROLOGY
WORKSHOP AND TAPE SWAP

SPECIAL SESSION:
"NEW RADAR AND
SATELLITE TECHNOLOGIES
AND APPLICATIONS TO
IMPROVE OPERATIONAL
WEATHER SUPPORT"

6TH ANNUAL NWA
SCHOLARSHIP GOLF OUTING

AWARDS LUNCHEON

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2007 NWA Scholarship Golf Outing

D'Andrea Golf Club
Sparks, Nevada
Lunch at noon

Tee times begin at 1:30

Contact Betsy Kling to sign up or pre-pay on your
pre-registration form.

Includes lunch, driving
range, greens fees, golf cart
and scholarship donation.

\$95



A special thanks to our sponsors:



President's Message from front

and updating of these important association publications can continue in the future. I am happy to say that we are well on our way to accomplishing all of these goals.

I am proud that this important milestone for the Newsletter has been accomplished this month, and look forward to the debut of the *Digest's* new look by the start of 2008.

Thanks to everyone who helped make this happen!

Alan Gerard, President

NWA 32nd ANNUAL MEETING UPDATE and PREREGISTRATION FORM

The National Weather Association's 32nd Annual Meeting will be held from 13 – 18 October 2007
at the Circus Circus-Reno Hotel, Reno, Nevada.

Theme: Building the Bridge from Best Forecast to Best Response

- **13 October:** Sixth Annual Golf Outing to benefit the NWA Scholarship Fund will be held on Saturday afternoon starting with lunch at the D'Andrea Golf Club in nearby Sparks, Nevada. Onsite registration begins at the NWA Information desk at the meeting hotel in conference room Mandalay 1. Exhibits will setup and WSI will be offering training for clients.
- **14 October:** BROADCAST METEOROLOGY WORKSHOP in Mandalay A ballroom will include presentations appropriate to continuing education for weathercasters, but open to all interested. EXHIBITS OPEN in Mandalay 2 and 3. Tape Swap Sunday evening in Mandalay A ballroom -- bring a vhs tape of one recent weathercast for discussion.
- **15-18 October:** ANNUAL MEETING GENERAL SESSIONS in Mandalay A ballroom will include a wide variety of topics relating to OPERATIONAL meteorology, climatology, hydrology, weather broadcasting, new research applications, and related activities. **The Annual Awards Luncheon will be on Wednesday, 17 October.**

The Annual Meeting Program Committee Chairperson is: Randy Graham, the Science and Operations Officer at the NOAA/NWS Forecast Office, 2242 West North Temple, Salt Lake City, Utah 84116; (801) 524-5141; annualmeeting@nwas.org. The Broadcast Meteorology Workshop Program Chair is **Bryan C. Karrick**, NWA Councilor and KCCI-TV meteorologist, 888 Ninth Street, Des Moines, IA 50309-1288; bkarrick@hearst.com. For the latest information on exhibits, accommodations, registration and the overall meeting agenda, please see the NWA Web site (www.nwas.org).

HOTEL INFORMATION: Circus Circus Reno is at 500 North Sierra Street, Reno, Nevada 89503. It is a full-service resort hotel, convention center and casino. Complimentary airport shuttles to/from the Reno/Tahoe International Airport are available for all Circus Circus-Reno guests. More hotel information can be viewed at Web site: www.circusreno.com. **NWA discount room rates are for North Tower Standard rooms: Friday and Saturday** -- \$89.00 per day plus tax for a single or double room; **Sunday through Thursday** -- \$55.00 per day plus tax for a single or double room. If more than two persons occupy a room, an additional \$10.00 per person, per night, plus tax will be added to the room rate. Guestrooms must be occupied and registered to at least one adult who is 21 years of age or older. **To reserve a room for the Annual Meeting**, please call the Circus Circus-Reno Room Reservation Department at 1-800-648-5010 and request the **NWA 2007** group rate. **Please reserve your hotel room NO LATER THAN 19 September 2007 to obtain the NWA discount rates.** Rooms will be on a space-available basis thereafter or at higher rates.

ANNUAL MEETING PREREGISTRATION: The NWA Annual Meeting preregistration fee includes a preprint volume with program and abstracts. For the period of days registered for, it also includes: admission to all presentation, workshop and exhibit sessions and coffee/refreshment breaks. Full registration for the period 15-18 October includes the Awards Luncheon on Wednesday.

THE PREREGISTRATION FEES payable to the NWA by 5 OCTOBER 2007* are:

- **For 14 October, Broadcast Meteorology Workshop:** \$75 for NWA members and presenters (student and retired members \$45); \$100 for non-members (student and retired non-members \$70). This includes exhibits & Tape Swap.
- **For 15-18 October, Annual Meeting sessions/activities:** \$175 for NWA members and presenters (student and retired members \$100); \$215 for non-members (student and retired non-members \$135). This fee includes the Awards Luncheon on Wednesday.

Special one-day rates for each day during the period 15-18 October (for those that cannot attend the entire conference) are: \$60 for NWA members and presenters (student and retired members \$40); \$85 for non-members (student and retired non-members \$60). Day rates do not include the Awards Luncheon. Extra tickets for the Awards Luncheon are available at \$30 each. Golf Outing fee of \$95 covers lunch, all course fees and a donation for scholarships.

To preregister, please copy this form and mail it with full payment of fees by 5 October 2007 to: NWA Meeting, 228 West Millbrook Road, Raleigh NC 27609-4304 USA. Make payment to "NWA" in US funds by a US bank check, money order or government/institution purchase order. Registration by credit card is available on the NWA Web site at: www.nwas.org/meetings/nwa07mtg.html

Name (for nametag): _____

Employer, School or other Affiliation (for nametag): _____

City/State (for nametag): _____

Telephone number and e-mail address: _____

Arrival Date at meeting: _____ Departure Date from meeting: _____ Preregistration fees: \$ _____

No. of extra Awards Luncheon tickets (\$30 each): ____ No. for Golf Outing (\$95 each) ____ Total Funds enclosed: \$ _____

Please Circle all applicable terms/phrases listed here: NWA member NWA local chapter member non-member
Student Retired Session Chair Presenter Program committee member
Local Arrangements committee member I will bring a tape to the Tape Swap I'll attend the Tape Swap but not bring a tape

*Registration fees after 5 October via mail, online and onsite will be: \$10 more for each day of the meeting (\$5 for students/retirees), and \$25 more for the period 15-18 October (\$15 for students/retirees).

Executive Director's September Message

Welcome to the new look of the National Weather Association Newsletter! After several years of discussions, planning, and championing by the Publications Committee, the NWA Council voted in May of this year to inaugurate a full-color Newsletter format with the September 2007 issue. This will be the first significant format change since November 1990 and will usher in an era of increased use of graphics and photos in the Newsletter.

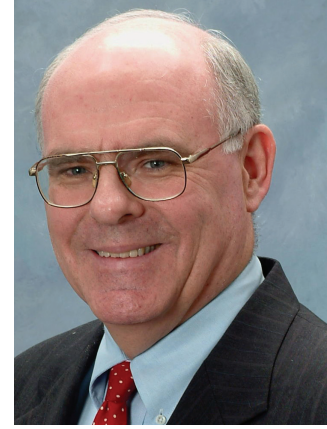
I am excited that I will be editor and publisher of the new formatted Newsletter. The great majority of NWA members receive benefits from their membership by receiving the monthly Newsletter, receiving the *National Weather Digest*, and by visiting the NWA Web site (which includes the very successful Electronic Journal of Operational Meteorology).

Per other Council decisions, the NWA Web site and the *Digest* are also undergoing changes. The Web site (www.nwas.org) will sport

a new look this fall, and *Digest* Volume 31, Issue Number 2, to be published in December 2007, will be in an all color format.

I would like to thank Janice Bunting who served as editor for several years. Due to new opportunities, Janice has requested to step down as chief editor. However, I am very pleased to report that she has agreed to remain a contributing editor for the Newsletter. Most of the wonderful weather stories and summaries appearing over the years were a result of Janice's work. I also must thank Kevin Lavin who served as publisher of the Newsletter for well over a decade. He kept "the presses running", ensuring that members received this most popular publication.

Steve Harned, Executive Director



Dates 2 Remember

Sept. 25: Deadline for October NWA Newsletter

Oct. 5: Preregister deadline for the 32nd NWA Annual Meeting in Reno, page 7

Oct. 13: Sixth Annual NWA Scholarship Golf Outing, page 6

Oct. 13 - 18: NWA Annual Meeting in Reno, page 6

Oct. 27: Eighth Annual Southern New England Weather Conference, Brookline, Mass.

Jan. 20 - 24: 88th Annual AMS Meeting, New Orleans, La.

Jan. 23 - 24: Fifth GOES Users' Conference, New Orleans, La.

More Professional Development Opportunities are on page 3 or visit www.nwas.org/meetings/meetings.html.

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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. Newsletter subscriptions are available for \$18 per year plus extra shipping costs outside U.S. Single copies are \$1.50. Please contact the NWA office with address changes.

Supporting and promoting excellence in operational meteorology and related activities since 1975.

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