



NEWSLETTER

**National Weather
Association**

NO. 09 – 6 JUNE 2009

Volunteer Precipitation Observations

Volunteer weather observations have long been a thread in the fabric of America. From Thomas Jefferson and Ben Franklin to today's backyard weather watchers, volunteer observers play important roles that help weather forecasters, climatologists, research scientists and many others.

Precipitation (rain, hail, snow) is an ideal weather element for volunteers to measure. Because precipitation is so incredibly variable -- from place to place, storm to storm and year to year -- there is no limit to how many volunteers are needed. Every storm is interesting and important.

Lack of precipitation is equally important. It doesn't take much time to measure and report, but the small effort of many individuals results in valuable information for your local community as well as the nation. Furthermore, through the discipline of daily measurements, volunteers learn first hand about the nature of their own weather and climate. There are already expensive weather observing networks across the country; however, the observations from local volunteers fill in the many gaps and give a higher resolution picture of how much rain or snow truly fell.

See VOLUNTEER, page 6



A 4 inch diameter rain gauge in Fort Collins, Colo., collects snowy precipitation.

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Great Weather Photographs Needed!

Get published on the front of the next *National Weather DIGEST* with your best shot: flooding, hurricanes, high wind ... Enter your best shot by July 10.



Members can submit photos to exdir@nwas.org or on CD to NWA Headquarters (mailing address on back of newsletter).

Preferred formats are EPS or TIFF -- but high-resolution JPGS will be accepted.

The cover photo will be selected by the Publications Committee.



Read the NWA president's interview with Bill Read, Director of the National Hurricane Center, page 3.

Outreach to National Weather Service (NWS) Partners: Training on the Dual-Polarization Radar Upgrade to the WSR-88D

Starting in 2010, the entire fleet of WSR-88Ds (Weather Surveillance Radar – 1988 Doppler) is scheduled to undergo a major software and hardware upgrade that will greatly enhance its data collection capabilities. This upgrade, known as dual-polarization (or dual-pol), will allow each radar to collect data with information about the horizontal and vertical properties of weather (e.g., rain, hail) and non-weather (e.g., insect, ground clutter) targets. Dual-pol data are comprised of several new products and algorithms that will be available for National Weather Service (NWS) forecasters, their partners and the general public. Each radar will be down for 10-14 days while the upgrade is performed, while the entire network upgrade will take approximately three years.

As part of this system upgrade, the NWS's Warning Decision Training Branch (WDTB) is developing training to help NWS partners effectively incorporate these new data into their decision making. This effort includes outreach (for delivery by local Warning Coordination Meteorologists or WCMs) for emergency managers, media weather broadcasters and forecasters in America's Weather Enterprise.

This initiative will likely include:

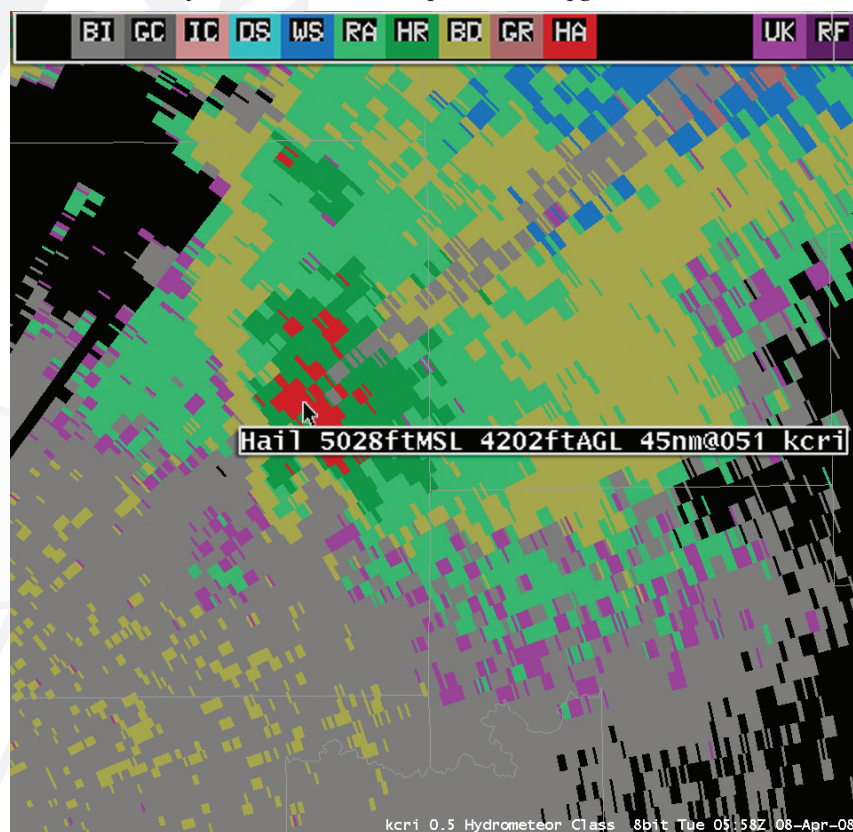
- Presentation materials (i.e., PowerPoint presentations and graphics) to support local WCMs in their outreach efforts;
- Background information and training available on-line to help non-meteorologists better understand the basic scientific concepts relevant to dual-pol data interpretation;
- On-line training on the new WSR-88D dual-polarization radar data and how non-meteorologists are most likely to make use of the data; and
- Instructions for non-NWS meteorologists on how to best apply the on-line training modules from the NWS WSR-88D dual-pol training course.

To help identify the specific training needs of emergency managers, media, and America's Weather Enterprise, affiliates with the University of Oklahoma's Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) are gathering information from people in these communities on how they think dual-pol data may impact them.

If you are interested in participating in this effort, regardless of your current understanding of dual-pol radar, please visit www.cimms.ou.edu/news/surveytraining.php.

Liz Quoetone
NWS/OCWS/WDTB

Below is an example of the Hydrometeor Classification Algorithm (HCA) product that will be available after the WSR-88D dual-polarization upgrade.



Emerging Technologies in the Field to Improve Information in Support of Operations and Research

Albert E. Pietrycha, Scott F. Blair, Tyler J. Allison, Derek R. Deroche and Robert V. Fritchie recently published an Electronic Journal of Operational Meteorology (EJOM) paper this spring titled, "Emerging Technologies in the Field to Improve Information in Support of Operations and Research."

They discuss three prominent emerging technologies: the Spotter Network, the Mobile Rapid Environmental Sampling System, and Live Chase Cam and how these tools provide real-time applications for severe weather reporting, dissemination of data collected in situ, field coordination, mesoanalysis, warning decision making, and quicker dissemination of relevant information to the public. A future vision of the further development and integration of these technologies is also discussed.

It is also worth mention, related to this paper, that on April 7, 2009, Albert Pietrycha (NWS Goodland, Kan.) was the recipient of the 2008 National Oceanic and Atmospheric Administration (NOAA) Bronze Medal Award - the highest honorary recognition given by the NOAA administrator - for integrating the Spotter Network into National Weather Service operations for use in tracking the location of mobile storm spotters during critical weather events.

Read the Pietrycha et al., 2009 article on the NWA Web site: www.nwas.org/ej/2009/2009.php.

In its initial outlook for the 2009 Atlantic hurricane season, which runs from June through November, NOAA's National Weather Service Climate Prediction Center calls for a 50 percent probability of a near-normal season, a 25 percent probability of an above-normal season and a 25 percent probability of a below-normal season.

President's Message: Interview with Bill Read

I think it is appropriate as we head into the 2009 hurricane season to spotlight Bill Read, Director of the National Hurricane Center (NHC), an individual who has supported and made significant contributions to the National Weather Association. Bill was NWA President in 2003. I've known Bill for many years through the NWA. We also overlapped for a few years in Texas while I was at NWS Fort Worth and Bill was in charge of the Houston Forecast Office (WFO HGX). I asked Bill a series of questions about his career, hurricane forecasting and the NWA.

Mike: *Bill, you were the Meteorologist in Charge of the NWS Houston office for over 15 years. Houston is a major metropolitan area with a huge media market. How does that experience compare to being in charge of the Hurricane Center?*

Bill: Actually, the two jobs are very different. As MIC, you can't be all tropical, all the time. You have many very important service programs to keep on top of. The Houston area is loaded with challenges, including flash and river flooding, severe weather, two major hub airports, critical marine weather support for one of the busiest ports, HAZMAT support, air quality, and even fire weather. At NHC, we are able to focus on marine and tropical cyclone science and service. On the other hand, reaching consensus among our customers at WFO HGX was relatively easy – at NHC it is always a challenge getting agreement from Maine to Brownsville and points in between.

Mike: *First let me say that the forecasters at the NHC are doing a fantastic job and are under a lot of pressure to get the forecasts right with pinpoint accuracy once a storm forms. With that in mind, in your opinion, once a tropical cyclone forms, what do you think is the greatest challenge facing your Hurricane Specialists?*

Bill: Thank you for the good words. Not sure I can give a simple answer as each storm potentially presents a different challenge, be it track, intensity, timing of watches and warnings. One of our greatest challenges service wise is getting decision makers to understand they have to base their call on probabilistic, not deterministic forecasts. Some critical decisions are made at 96 hours, when the probability of the actionable impact is less than 10 %. For the general public this concept is even harder to get across.

Mike: *I admit that I read the Tropical Cyclone Discussions all the time. It seems that there is often more uncertainty projecting the intensity of the storm than the track. Is that true and are you hopeful that tropical cyclone intensity forecasting will continue to improve in the coming years?*

Bill: Our verification statistics clearly show that advancement in track skill is moving ahead while not much change in intensity. We especially

have a challenge anticipating rapid changes in intensity. The Hurricane Forecast Improvement Project currently underway will address some of the physics, modeling and observational challenges that need to be overcome to gain ground on this issue. Our ambitious goal is to be able to forecast most of the time a rapid change in intensity 24 hours in advance.

Mike: *Before we leave hurricane forecasting, can you give us a general outlook for 2009 in terms below, normal or above normal for the Atlantic basin?*

Bill: Let's imagine for a moment that I gave you a guaranteed forecast of only six named storms, one of which would make landfall. I cannot tell you where. Would you prepare less than for 2008 where we had 16 named storms and too many landfalls to remember? Well, if you lived in Miami Dade in 1992 and faced Andrew, I'll bet that was the most active season in your lifetime.

Mike: *Bill, let's switch gears a little and discuss the NWA. What do you see as the strengths of the organization at the present time?*

Bill: Several aspects come to mind. Our annual meeting continues to be the best of breed of the many meetings I attend. Membership communication through the newsletter and Web site are also important to me. I believe our openness for participation from greybeards like me through brand new members in our profession is a great cultural key to hold onto.

Mike: *What areas does the NWA need to make improvements in to be more successful in the future?*

Bill: How to keep up with changing times and technology. At least in South Florida, major changes appear to be occurring in the media. Maintaining relevance in professional organization membership is also important. I am confident through fresh ideas and leadership from our members we will continue to meet these challenges and others.



Mike Vescio, NWA President

Some excellent words from Bill who, by the way, is scheduled to be our keynote speaker on Monday morning of the NWA Annual Meeting in Norfolk (see page 5 for more). Bill mentions that the NWA needs to keep up with changing times and technology. This topic was addressed at our mid-year business meeting in Omaha. Preliminary results from this meeting will be the subject of the July newsletter.

Write like the Wind

As scientists, it is important for us to keep up-to-date on the most recent research results in order to provide our customers with the best products and services possible. We should also provide our research results to the community because other operational meteorologists want to know what we have learned and what techniques we have developed that could improve their work. How can we find out about research results or forecasting methods developed in other offices that could help us with our work? How can we share what we have learned about weather forecasting in our area that could benefit others? Two of the best ways are to participate in the NWA Annual Meetings, and read and contribute to our official publications: the *National Weather Digest*, *Electronic Journal of Operational Meteorology (EJOM)*, and the *Newsletter*.

No matter what medium we use to obtain or provide our information, reading and writing are usually involved. All of us on the Publications Committee recognize that technical writing is difficult, be it an abstract for the Annual Meeting or an article for the *Digest*. Sometimes it takes an act of courage to ask a co-worker or supervisor to review our documents, worrying they may find many errors and 'find us out' as someone who can't write. The fact is no one writes well the first time they do it. It takes a great deal of practice and willingness to take constructive criticism from reviewers to become a good writer.

There are many resources available to help improve writing skills. A good place to start is your local community

college or university. For those with odd work schedules, check to see if your local college offers online writing classes monitored by a qualified instructor. Beware of Internet sites not affiliated with an accredited institution – they are usually more skilled at taking your money than teaching you how to write. Another way to help your writing is to read. Articles and books are published only after going through rigorous editing, so they provide good writing examples. Reading helps build your knowledge

of grammar, spelling, good style, proper sentence structure, and how to put words together to make an interesting article. The book *On Writing* by Stephen King is an easy and entertaining read that has great advice on what constitutes good writing.

There are several good resources that address writing style. *The Elements of Style* (Strunk and White) and *Writing with Style: Conversations on the Art of Writing* (Trimble) are little books with a lot of easy-to-understand information. *Geowriting: A Guide to Writing, Editing, and Printing in Earth Science* (Bates, Adkins-Heljeson, and Buchanan)

provides help to students and scientists in the earth sciences who write technical articles.

The hardest part about writing is putting down the first sentence. Our advice: just write it! Odds are, the first sentence will be deleted or changed beyond recognition during your self-editing process. It doesn't have to be perfect the first time. The important thing is to get it written. Once the first sentence is down, it's easier to write the next one. Before you know it, you've written a paragraph, a section, and then a whole article. Another difficult part is asking someone to review your writing. You worked hard on your research and are proud of the results, and worked equally hard on writing an article describing it. It can be discouraging to have your document returned with red marks all over it. Remember that you are not writing for you, but for the readers. You want those readers to enjoy reading your article and learn what you learned.

So go ahead, write that first sentence and submit the resulting article to one of the NWA publications. We are interested in what you've done and learned and want to read about it.

Winifred Crawford
Publications Committee



There will be **no** scholarship golf outing this year...

Instead, we'll be

Bowling for Scholarships

Tuesday, October 20th

During the 34th NWA Annual Meeting

\$40 per person

(Includes transportation, dinner, games, shoes, and donation)

Who will be the **King Pin** of the NWA?

Space is limited!

Sign up early on your NWA Annual Meeting registration form.

Teams will be put together in Norfolk.



NWA author guidelines are online

Digest ~ www.nwas.org/digest/instructions.php

EJOM ~ www.nwas.org/ej/e-j.php

Newsletter ~ www.nwas.org/newsletters/index.php

34th NWA Annual Meeting: Pre-register Now!

The National Weather Association's 34th Annual Meeting will be held at the *Sheraton Waterside Hotel*, on the waterfront in downtown Norfolk, Va., Oct. 18 - 22, 2009. Visit www.nwas.org/meetings/nwa2009 for more.

Annual Meeting Hotel Information

The Sheraton Norfolk Waterside Hotel: www.sheraton.com/norfolk

NWA room rates (make sure to request the NWA group rate when booking!):

- Deluxe guest rooms: \$94 per night (single)
- \$139 per night (double)

Reserve a room by phone by calling (888)627-8042.

The Future is Now: New Technologies and Techniques to Support the Weather Enterprise and Society: 2010 and Beyond

Why Pre-register? The pre-registration fee includes a pre-print volume with program and abstracts. For the period of days registered, it also includes admission to all oral presentations, poster sessions and exhibit sessions plus coffee/refreshment breaks. Full registration includes the Wednesday Awards Luncheon.

Pre-registration Fees (through Oct. 9):

Sun., Oct. 18: Broadcast Workshop and DVD Swap (8 a.m.–11 p.m.)

- \$100 NWA members and presenters
- \$50 member students and retired members
- \$140 for non-members
- \$95 for non-member students and retired

Sun., Oct. 18: Student Seminar and Resume/DVD critique night session (1 p.m.–11 p.m.)

- \$35 NWA student members and presenters
- \$50 for non-member students

General Sessions/Activities Mon.–Thurs., Oct. 19 - 22

- \$240 NWA members and presenters
- \$125 member students and retired members
- \$280 for non-members
- \$175 for non-member students and retired

Special One-Day Rates for period Oct. 19–22

- \$95 NWA members and presenters
- \$50 students and retired members
- \$120 for non-members
- \$90 for non-member students and retired

Special All events, Sun.–Thurs.

- \$330 NWA members
- \$410 for non-members

Special Student and Retired, All events, Sun.–Thurs.

- \$145 NWA members
- \$215 for non-members

Pre-Register On-Line by credit card (MC or Visa):

- Attending Broadcast Workshop and/or most of the General Session register at: www.nwa-registration.org/register.shtml
- Attending Broadcast Workshop and/or only a day or two of the General Session register at: www.nwa-registration.org/registerbyday.shtml

Pre-Register by Mail:

Mail this form with full payment of fees by **Oct. 9, 2009** to: NWA Meeting, 228 West Millbrook Road, Raleigh NC 27609-4304 USA. Make payment to "NWA" in U.S. funds by a U.S. bank check, money order or government/institution purchase order.

Name (for nametag): _____

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

City/State (for nametag): _____

Telephone number: _____

E-mail address: _____

Arrival Date at meeting: _____

Departure Date from meeting: _____

Preregistration fees: \$ _____

Number of extra Luncheon tickets (\$30 each): \$ _____

First annual "Bowling for Scholarships", Tues., Oct. 20 (\$40): \$ _____

Total Funds enclosed: \$ _____

Please Circle ALL following phrases that apply to you:

NWA member	NWA local chapter member	Non-member	Student
Retired	Session Chair	Presenter	
Program committee member	Local Arrangements committee member		
Bringing a DVD to the DVD Swap	Attending DVD Swap without a DVD		
Student with broadcast DVD for critique at Sunday Resume/DVD session			

If a non-member joins, they will immediately be eligible for the member rates

Some important things to convey to citizens when taking precipitation observations:

1) Gauges.

It is important to choose good equipment and understand strengths and weaknesses. There is no perfect rain gauge at any price. The high capacity 4-inch plastic rain gauge (see front page photo) and the standard 8-inch gauge tend to give excellent results over broad ranges of conditions. Electronic gauges are convenient and great for reporting instantaneous rainfall rates, but they may not be as good for monthly or seasonal totals. For measuring snow, you will want to obtain a snow board and a ruler scaled to read to the tenth of an inch.

2) The siting of your equipment.

Where you put your gauge matters. It will affect the “catch” or amount of precipitation that lands in your gauge. Avoid trees and buildings if at all possible. In windy areas, mount your gauge closer to the ground. Solid fences can cause wind patterns that compromise rain gauge readings. You will also want to make sure that your gauge is level. Keeping your equipment away from sprinklers and animals is also vital.

3) Taking your observation.

It is important that you take an accurate observation. This may take some practice but is easily learned. If you are taking the observation as part of a reporting network, make sure to check your gauge at the same time as others for consistency.

4) Reporting your observation.

If you are part of a backyard weather network, be sure to make a timely report of your observation. More and more

reporting is now done over the Internet, although some networks still collect data by phone or written reports. Watch for decimal and rounding off errors. If there is a place for comments, your weather descriptions, such as when rain began or ended, provide helpful additional information.

5) Enjoying the process.

One of the keys to weather observing is enjoyment and satisfaction. We tend to learn more and stay with a task longer when it's something that we enjoy and know is beneficial to others. With the CoCoRaHS network (Community Collaborative Rain, Hail and Snow network), we emphasize this and encourage our observers regardless of age to participate as long as they are having fun. When it is no longer enjoyable, the quality of the data may deteriorate.

These simple suggestions can be applied to other types of observations as well. Our appreciation to Henry Reges, CoCoRaHS National Coordinator, Colorado State University Fort Collins, Colo., for his input to this article (hreges@atmos.colostate.edu and www.cocorahs.org.)



A 2.4 inch diameter rain gauge ready for service in Fort Collins, Colo.



Ward Smith gets help checking a rain gauge from 7-year-old son, Jacob, in Concord, N.C.

Precipitation Observing Network Resources

CoCoRaHS (training slide shows and other instructional materials)
www.cocorahs.org

NWS Cooperative Observer Program
www.nws.noaa.gov/om/coop/

Hydrometeorological Networks in the US
www.eol.ucar.edu/projects/hydrometnet/

Citizen Weather Observer Program
www.wxqa.com/

MNGage (HIDEN)
<http://climate.umn.edu/HIDENsityEdit/HIDENweb.htm>

NERain
<http://dnrdata.dnr.ne.gov/NeRAIN/index.asp> (was this verified?)

Cooperative Huntsville-Area Rainfall Measurements (CHARM)
<http://weather.msfc.nasa.gov/charm>

Rainlog
<http://rainlog.org/usprn/html/main/maps.jsp>

Oklahoma Mesonet
www.mesonet.org/

The High Plains NWA Chapter met for lunch in Norton, KS on Tuesday April 28, 2009, with 11 members attending. After lunch, introductions and the business meeting, we were treated to a presentation by Al Pietrycha, SOO at WFO Goodland. Al spoke on "Observational Analysis and Doppler Radar Interpretation of Non-mesocyclone Tornadoes." Al's talk centered on landspout tornadoes: specifically radar interrogation and suggestions for best-practices for tornado warning issuances. His PowerPoint slides had many excellent case examples of both radar reflectivity and velocity data in association with photos of these events, centered mainly around eastern Colorado.

Newly elected President Mike Umscheid of WFO Dodge City started the meeting and John Stoppkotte of WFO North Platte gave an updated report on the upcoming 13th Annual High Plains Conference, scheduled for August 27-28 in North Platte, NE. A call for papers was sent out April 30, just after this meeting. Ideas were discussed on a meeting for the Wednesday afternoon prior the conference (August 26), possibly centering on Climate. The possibility of having a conference t-shirt was also discussed. At this time, the price of the conference is planned to be the same as last year. . The local college is donating a room for the conference, and a banquet is set up for Thursday night. The conference banquet/rooms are at the Quality Inn and Suites (where most attendees will be staying). Another planning meeting is scheduled soon. More will be posted on our Web site: <http://www.highplains-amsnwa.org/>

This year's Jim Johnson Scholarship (\$500) was awarded to Jennifer Uhrich, a senior at North Platte High School in Nebraska. Jennifer is planning to major in Meteorology at the University of Nebraska in Lincoln. Talks of a possible High Plains/Wichita chapter merger and Wichita joining us in the rotation for the annual High Plains Conference have been put on hold for now. Any chapter members that are interested in doing a poster for the NWA Annual Meeting were encouraged to contact Mike Umscheid. The next meeting will be in the mid-July time frame.

Mike Umscheid
High Plains Chapter President

Tim Burke
High Plains Chapter Secretary

Professional Development Opportunities in 2009

13th Annual High Plains Conference: Aug. 27-28

The High Plains Chapter of the NWA will again sponsor this popular conference. It will be at the Mid-Plains Community College - North Campus, North Platte, NE in North Platte, NE. A preliminary program, conference registration, hotel information and other details will be available soon. For more, go to:

www.highplains-amsnwa.org/ for more information.

5th Symposium on Southwest Hydrology: Sept. 30 - Oct. 1

Co-sponsored by COMET, the National Weather Service, the University of New Mexico Department of Earth and Planetary Sciences, the Electronic Journal of Severe Storm Meteorology and Vaisala, Inc., the symposium will be held at the Albuquerque Marriott Hotel-Uptown. Register and submit abstracts online at: www.weather.gov/abq/swhydromet/index.htm. Abstracts should be submitted electronically via this symposium Web site no later than Fri., July 31.

34th NWA Annual Meeting: Oct. 17 - 22

Reserve your room now at the Sheraton Waterside Hotel in Norfolk, Va. Details on page 5 and at on the NWA Web site at: www.nwas.org/meetings/nwa2009.

6th GOES Users' Conference: Nov. 3 - 5

"Bringing Environmental Benefits to a Society of Users" will be held at the Monona Terrace Convention Center in Madison, Wisc. Organized by NOAA with support from CIMSS at the University of Wisconsin-Madison. For more information visit: http://cimss.ssec.wisc.edu/goes_r/meetings/guc2009. The conference co-chairs are Dick Reynolds (410-268-5360; Dick.Reynolds@noaa.gov) and James Gurka, NOAA/NESDIS (james.gurka@noaa.gov).

Reminder:
Nominations for the 2009 NWA Annual Awards should be postmarked by July 1 to be considered this year!

The nomination cover sheet is at www.nwas.org/awards/awardnomination.pdf.

Our hands are tied: Pay your dues or lose it all!

Haven't paid your dues for this year? You still have time before getting dropped from the roles. We would hate to lose you!

We can't even send you any more newsletters if your membership lags!

There's an easy online option for renewing membership at www.nwa-registration.org. An old fashioned option? Sure! Mail the dues with the renewal form found at www.nwa-registration.org/nationaldues.shtml to the NWA Office!

NATIONAL WEATHER ASSOCIATION
228 W. Millbrook Road
Raleigh, NC 27609-4304
(919) 845-1546

Deadline to renew is July 10 - stay with us and keep your membership active!



Dates 2 Remember

July 1: Deadline for NWA Annual Award nominations

Aug. 27-28: 13th Annual High Plains Conference. North Platte, Neb.

Sept. 30-Oct 1: 5th Symposium on Southwest Hydrology. Albuquerque, N.M.

Oct. 17-22: 34th NWA Annual Meeting. Norfolk, Va.

Nov. 3-5: 6th GOES Users' Conference. Madison, Wisc.

See page 7 or www.nwas.org/events.php for details on these and additional Professional Development Opportunities!

NWA Newsletter (ISSN 0271-1044)

Contributing Editor: Janice Bunting

Editor and Publisher: Steve Harned, Executive Director

Published monthly by the National Weather Association, 228 West Millbrook Road, Raleigh, N.C. (USA) 27609-4304; phone ~ (919) 845-1546; fax ~ (919) 845-2956; exdir@nwas.org; www.nwas.org.

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 send address, phone number, email and affiliation changes to assist@nwas.org.**

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

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