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

No. 15 - 3

# Newsletter M A R C H

2015

### **A Look Back at Our Presidential History**



The National Weather
Association
is celebrating
its 40th
Anniversary
this year, and
we're taking
a walk down

memory lane. The NWA Office has reached out to past presidents and asked them for their most memorable or favorite moment from their time as NWA President. In the coming Newsletters, we'll highlight their responses.

### 2011 Dr. Patrick S. Market

"As President I got to call newly awarded Seal holders with the good news. I have a former student who is now quite the talented broadcast meteorologist. I was able to call her with the news that she had been awarded her Seal, and she was elated. It closed a professional circle, of a kind, and I got to make someone's day."



### 2014 Jeffrey P. Craven

"No question, it was listening to Dr. Chuck Doswell give his acceptance speech for receiving his Special Lifetime Achievement Award. Watching his reaction to the standing ovation and then the quality and content of his words was a special moment. He gave a lot of credit to his success to his close friend and colleague Al Moller, who we had lost

in 2014. So there were certainly a variety of emotions in a short amount of time that made it very memorable to me and all those who witnessed it."

### Past Presidents

Directors were Jerrold A.	1994	Theresa Rossi Drake
LaRue, Anthony E.	1995	Larry R. Johnson
Tancreto, and Joseph R.	1996	Norman W. Junker
Vazzo	1997	Thomas C. Adang
Jerrold A. LaRue	1998	Joseph T. Schaefer
Anthony E. Tancreto	1999	James T. Moore
Clifton W. Green	2000	Roderick A. Scofield
Maury Pautz	2001	Leslie R. Lemon
Salvatore R. LeMole	2002	John B. McLaughlin
Dave Barber	2003	Bill Read
John J. Cahir	2004	Dr. Paul J. Croft
Edward W. Ferguson	2005	Steven J. Weiss
Vincent J. Oliver	2006	David I. Knapp
Philip A. Calabrese	2007	Alan E. Gerard
George L. Frederick, Jr.	2008	Dr. John R. Scala
Mark D. Shulman	2009	Michael D. Vescio
Kenneth C. Crawford	2010	Steven M. Zubrick
Ron L. Alberty	2011	Dr. Patrick S. Market
Gary K. Grice	2012	Elizabeth Quoetone
Timothy D. Crum	2013	Bruce G. Thomas
Stephen W. Harned	2014	Jeffrey P. Craven
Floyd F. Hauth	2015	Dr. Elizabeth Page
	LaRue, Anthony E. Tancreto, and Joseph R. Vazzo Jerrold A. LaRue Anthony E. Tancreto Clifton W. Green Maury Pautz Salvatore R. LeMole Dave Barber John J. Cahir Edward W. Ferguson Vincent J. Oliver Philip A. Calabrese George L. Frederick, Jr. Mark D. Shulman Kenneth C. Crawford Ron L. Alberty Gary K. Grice Timothy D. Crum Stephen W. Harned	LaRue, Anthony E. 1995 Tancreto, and Joseph R. 1996 Vazzo 1997 Jerrold A. LaRue 1998 Anthony E. Tancreto 1999 Clifton W. Green 2000 Maury Pautz 2001 Salvatore R. LeMole 2002 Dave Barber 2003 John J. Cahir 2004 Edward W. Ferguson 2005 Vincent J. Oliver 2006 Philip A. Calabrese 2007 George L. Frederick, Jr. 2008 Mark D. Shulman 2009 Kenneth C. Crawford 2010 Ron L. Alberty 2011 Gary K. Grice 2012 Timothy D. Crum 2013 Stephen W. Harned 2014

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### The NWA Digital Seal

by Miles Muzio

As the nature of weather information and dissemination to the public evolves, a need to stay one step ahead of technology has become critical. Among its charter responsibilities, a professional organization should set standards of excellence for its members to achieve and maintain. The NWA has expanded this duty to the growing domain of Internet



weather information. Since the mid-1970s, a high benchmark has been established for weather broadcasters to attain with the NWA Seal of Approval program. Over 960 certifications have been delivered over the years with more than 500 seal holders currently active.

Weather information perennially ranks highest in local research polls when viewers are asked why they tune in to the local news. This is consistent across all markets, weather intensive or not. But the shift away from television and traditional media to Internet and other digital media has become clear to all. Still, the hunger for weather remains high on the Internet as a single issue class of information being sought.

Late last year, the NWA debuted a new certification for its members, tailored to this new information archetype. Since then, some areas of the U.S. have new records for snowfall and bitter cold temperatures. A crowd of weather "experts" has appeared in cyberspace with their own opinions and angles on the extreme conditions. However, not all of these presences on the Internet are reputable.

Some have obvious credibility, such as the NWS, The Weather Channel, AccuWeather and WeatherNation (just to name a few). Avant-garde newcomers are popping up everywhere with fresh new approaches to weather data delivery. Many are run by sound and trustworthy individuals steeped in scientific background with extensive experience. But some are not.

Over the past 10 years, various weather sites have become notable for their exaggerated credentials and melodramatic claims. In other instances, hobbyists have come online with products that are represented as reliable. To the untrained eye, all these sites look credible. It is with the public trust in mind that our new NWA Digital Seal has been introduced. Three Digital Seals have been awarded so far. The program is an opportunity for online weather presenters. It is awarded to individuals, not companies. The Digital Seal is generally not available to broadcasters who also post on their station website.

Reliable weathercasters and bloggers are more important than ever. People need to trust their source of information. As the Digital Seal program grows, a Commission will be monitoring it and making recommendations for improvement. In the future, always look for the NWA Digital Seal of Approval to ensure your weather source is trustworthy.

Click to see how to apply, qualifications and proceduress or contact the NWA office.

# 40th NWA Annual Meeting Stay Connected!

Meeting hashtag: #NWAS15

Meeting updates will be posted on these NWA social media sites:

Facebook: www.facebook.com/nwasorg

Twitter: twitter.com/nwas

Google+:

https://plus.google.com/115267406833207403491/posts

### Welcome to the NWA!

New Members in February 2015

Regular/Military/Retired Marithza Calderon **Bob Cox** Patrick Gilchrist Ben Gutierrez Charley Kelly Michael Konowicz Matthew Little Patrick Moore Jennifer Pagliei **Aaron Perlman** Jacob Reed **Brad Reinhart** Bryan Rupp Ken Schneider Joe Smith Robert Whitehurst Jeff Wilcox

Student
Talan Andersch
Andrew Collins
Felicia Combs
Katherine Davis
Shane Eagan
Sebastian Harkema
Katelyn Hearn
Chasity Henson
Rachel Lezman
Lissette Nunez
Sarah Schulte

<u>Corporate Member</u> Vieux and Associates, Inc.



The NWA's Corporate Members are listed online at: www.nwas.org/corporate.php



Headlines regarding politics and attempts to influence the reporting of climate change research have highlighted how important our role as professionals is in building a scientifically literate public. A general understanding of the workings of the atmosphere can go a long way to help people better synthesize the weather and climate information they receive. Leading the way in these education efforts are many of our members. So, since many of us have education responsibilities as part of our job, this month, I'd like to explore how the NWA is working to support us in our efforts.

With so many sources of weather information available, people need to be able to decide what sources are credible. As an association,

supporting operational meteorology has meant giving our members an opportunity to document their professional achievement through the NWA Seal programs. The endorsement that these seals provide includes the achievement of initial certification and the requirement of continuing education and professional development to maintain the scientific integrity of the messages conveyed by our seal holders to the public.

The radio and television seals have been around for many years. More recently, after seeing the need to help the public sift through all of the weather information available on the web to find credible content, the NWA instated the digital seal. This seal is a way for webcasters and

electronic weather blog writers to show that they have the background and expertise to provide reliable information over the internet.

Operational meteorologists have the tasks of conveying weather information and in educating the public. As many broadcast meteorologists have taken on the role of station scientist, opportunities to educate the public are expanding. The NWA can help with this role through our professional development support. In addition to the NWA Annual Meeting, you can find a wealth of information on the member portal provided through the many links to learning opportunities on the <u>Professional Development Committee's web page</u>. With this wide variety of topics, members can enhance their understanding of different phenomena to better communicate with their audiences.

Scientific literacy is critical as the public continues to cope with extreme weather events and to adapt to our changing climate. We have an important role in helping people understand how they can be proactive in preparing and adapting to these events. At the same time, our broader efforts to increase scientific literacy by expanding the public's understanding of how the atmosphere works and what researchers are discovering will help people make better decisions about dealing with weather events in their world. The NWA is here to help us in our endeavors.

### **New NWA Seal Holders**

This month we would like to introduce our two newest NWA Seal recipients, the first of 2015: Trent Magill and Alex Wallace.



Trent Magill

my pleasure

to start this

message by

announcing

the NWA's

Elizabeth Page

month's

In last month's newsletter I talked about

Mentor Connections webpage where our

members can connect with professionals

across the weather spectrum. Ken Carey,

our Commissioner of Committees, writes

about the page in detail in this newsletter.

the importance of mentoring, so it is

Originally from St. Louis, Trent Magill recently moved from Cleveland to Knoxville, Tennessee. He is an avid storm chaser and has been fascinated by storms for as long as he can remember. But his most memorable storm didn't even produce a tornado. It was a thunderstorm, with hail the size of baseballs! Hail falls at about 95 mph, similar to a Major League fastball. Trent saw hailstones breaking through windows, car windshields, even through a tin barn roof! Thankfully no one was hurt, but that goes to show, even

storms without tornadoes are worth taking seriously. After several years fighting lake effect snow (and every other type of weather) in Cleveland at WEWS, he moved to Knoxville and now is the morning meteorologist at WATE. Trent graduated from the University of Missouri with a degree in meteorology.

Our most recent awardee of the NWA Seal is Alex Wallace. He grew up in the Washington D.C. area. During the Storm of the Century

Blizzard in 1993, Alex was amazed at the amount of snow. He had never experienced anything like it. It produced crazy snow totals that piled up to his thighs. As a 12-year-old, this was astonishing. Plus,



Alex Wallace

he got off from school for an entire week. Alex had to know how and why it happened. From that point on, he was hooked on the weather. He had worked as an intern at The Weather Channel while in college at the University of Georgia. In 2006,

he was hired and ultimately became an on-camera meteorologist for the network. His favorite part of the job is working with people he learns from.

"I'm not the kind of person who thinks I know it all," he said. Alex appreciates all the people who have great experience, knowledge and passion in different aspects of meteorology. He graduated from Mississippi State University with a master's degree in geoscience and broadcast meteorology.

Congratulations to both Trent and Alex for their accomplishments and for earning the NWA television Seal of Approval.

### **MetSat Award: Opening Soon**

Undergraduate students are invited to write an original paper on meteorological satellite applications. The Award winner will receive a \$500 Grant, free registration at the NWA Annual Meeting to present their paper, and a stipend of \$500 to help cover travel and hotel expenses

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### The High Plains NWA Chapter Meeting

The NWA High Plains Chapter held a virtual meeting on December 17, 2014, with 18 members dialed into this meeting. It started with a presentation by Greg Carbin, the Warning Coordination Meteorologist from the Storm Prediction Center in Norman, Oklahoma. This was the tenth year in a row Greg compiled the "Top Ten Meteorological Memories for the Year (2014)." Since the beginning of this project, it has become more popular each year. Greg now has a recorded version of this presentation, which he can send to various organizations.

The top ten memories from 2014 listed chronologically:

- 1.) January Cold and Dixie Woes: Niagara Falls nearly froze solid and significant snow fell in Alabama and Georgia.
- 2.) California Drought Nightmare: The most severe Palmer Index (a drought severity index) was recorded in California.
- **3.)** Atlantic Bomb of March 24-27: Low pressure off the New England coast produced very heavy snow and blizzard conditions over New England.
- **4.) Severe weather of April 27-30:** Over 70 tornadoes were reported across Arkansas and Mississippi, including an EF-4 which resulted in 34 fatalities and 434 injuries over a three day period.
- **5.) Gulf Coast Soaker of April 30:** Over two feet of rain fell from Mobile, Alabama, to Pensacola, Florida.
- **6.) June Nebraska Nasty:** 30 reports of hail two inches or larger on June 3. On June 16, the now "well known" Pilger, Nebraska, Twin Twisters occurred. There were 4 EF-4 tornadoes.
- 7.) Cool Summer? It may have seemed cool to some, mainly since just two years ago in 2012 many high temperatures records were established. Overall across the U.S., the June through August period was near normal.
- **8.) Western Fire Facts:** Affected California, Oregon and Washington. The average fire size was about double the average size, and was the 2nd highest average fire size in the past 13 years.
- 9.) November Cold and the Great Lakes Snow: November was the 2nd coldest November in 36 years for the U.S. Epic lake effect snow occurred east of the Great Lakes. In Buffalo, New York, five feet of snow fell which result in 13 fatalities. Some areas reported up to seven feet of snow and 70 inches of snow was reported in Western New York State.

The number 10 Memory was revealed on the December 29 episode of WeatherBrains. It is the near record low level of tornado activity. Once all data are finalized, the year may end with well under 1000 tornadoes.

Additional items from the meeting include a \$500 donation to the Hastings Children Museum. The profit from the latest conference was transferred to the Jim Johnson Scholarship fund. Dave Floyd from Goodland gave an update on the next Chapter conference to be held in Goodland at the local College. President Bill Taylor will send an email out soliciting new officer nominations. A vote will be sent out later via email in January, and most likely, a representative from each office will bring the ballots from the vote to the next face to face meeting for counting.

William Taylor President Tim Burke Secretary

### FROM OUR MEMBERS

### Safety Guide Available

Martin Lisius, president of Tempest Tours, is now offering the iBooks version of his new book on iTunes. "The Ultimate Severe Weather Safety Guide" is a multi-touch book that includes video shot by Lisius, along with text and photos.



Bob Baron speaking at the dedication

### **OU Weather Laboratory**

The University of Oklahoma's College of Atmospheric and Geographic Sciences dedicated the recently overhauled Oklahoma Weather Laboratory in a public ceremony March 24 on the first floor of the National Weather Center. Technology for the room was provided by Baron Services, Inc. It includes the Omni Broadcast graphics system, with VIPIR radar imaging and exclusive Baron severe weather data.

If you have member or corporate member news you'd like to see in the NWA newsletter, please contact our Communications Coordinator, Hulda Johannsdottir (hjohannsdottir@nwas.org).

### **KEEP THIS ON YOUR RADAR!**

After a successful course this spring, The University of Oklahoma Office of Weather Programs & Projects will again be offering the dual-polarization radar training course, using materials co-developed by the National Weather Service's Warning Decision Training Branch and OU's Cooperative Institute for Mesoscale Meteorological Studies.

The 20-hour course consists of 12 hours of web-based distance learning and eight hours of in-residence instruction using scenarios. Distance learning will begin in August, and an in-residence workshop will be held in conjunction with the National Weather Association's Annual Meeting in Oklahoma City this October (see page 6).

As a student of this Department of Commerce Gold Medal-awarded course, you will receive some of the same training as forecasters of the National Weather Service. NWA members save 10 percent off registration, as well as earn five CEUs upon course completion. Stay tuned for more details, coming next month! Email Nicole at <a href="mailto:nrobertson@ou.edu">nrobertson@ou.edu</a> with questions.



## National Tropical Weather Conference

Meteorologists, emergency managers, insurance professionals, meteorology faculty and students are invited to see and hear the latest news, debates and tropical system panels at the National Tropical Weather Conference, April 8 - 11 at the Hilton Garden Inn on South Padre Island, Texas. The upcoming hurricane season along with Hurricane Odile will be hot topics at the conference.



The conference will bring the current director of the National Hurricane Center and three former directors together to discuss tropical systems and forecasting. Conference presentations will cover tropical systems, mitigation, forecasting, seasonal forecasting, among others.

Visit <u>www.hurricanecenterlive.com</u> for conference registration.

NWA Seal holders will receive CEUs for attending.



### **New JOM Paper**

A new article has been published in the NWA's Journal of Operational Meteorology (JOM) since last month's Newsletter:

### JOM 2015-5: A Multisensor, Blended, Layered Water Vapor Product for Weather Analysis and Forecasting

By J. M. Forsythe, S. Q. Kidder, K. K. Fuell, A. LeRoy, G. J. Jedlovec, and A. S. Jones.

There are four categories of papers that can be published in the JOM. To see their names and descriptions, go to the <u>JOM Call for Papers</u>. If you are interested in submitting a paper to JOM, go to the <u>website</u> for author information.

Thank you to the JOM authors, reviewers and editors for continuing to make JOM a success. You can read papers by logging on to the <a href="NWA Member Portal">NWA Member Portal</a> and clicking on the JOM link under Additional Member Resources on the right.

Articles from 2013 and 2014 are available on the NWA website.

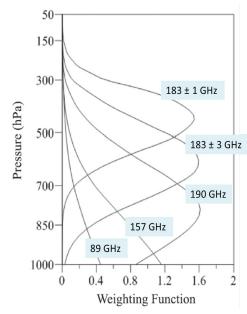


Figure 2 in JOM 2015-5. MHS sensor weighting functions after Zou et al. (2013). Similar channels sensitive to the water vapor profile are on the SSM/IS sensor.

# The NWA Sol Hirsch Education Fund Grants

The NWA is pleased to announce that applications are now being accepted for the Sol Hirsch Education Fund Grants. These Grants are awarded annually by the NWA to teachers/educators of grades K-12 to help improve the education of their students, school and/or community in the science of meteorology.

http://nwas.org/grants/solhirsch.php



# 40th NWA Annual Meeting

It's our 40th Anniversary!

Power of the Past; Force of the Future

October 17 - 22

Cox Convention Center Oklahoma City, Oklahoma



Photo courtesy of the Oklahoma City Convention & Visitors Bureau

### Location

**Conference Hotel:** The <u>Renaissance Oklahoma City Convention</u> <u>Center Hotel.</u>

Reservations may be made online or call (800) 468-3571 and telling them you are attending the National Weather Association Meeting. The room block is open until 18 September 2015 or until full.

**Conference Venue:** Cox Convention Center in downtown Oklahoma City

### Call for Abstracts

In addition to the traditional sessions on severe weather, weather and forecasting, etc., the Program Committee is specifically soliciting abstracts which relate to one of the following subthemes.

- NWA's 40th Anniversary (History, Retrospective)
- Integration of New Technology (Dual-pol, GOES-R, MYRORSS, Proving Ground)
- Advances in Numerical Weather Prediction (Warn-on-Forecast, Storm-Scale Ensembles)
- Innovations in Communicating High-Impact Weather Events (Social Media, Commercial Services, Simplification)
- Case Studies of High-Impact Events

Abstracts should be sent via the online form on the NWA website at: 2015 NWA Annual Meeting Abstract Submission Form. If you are unable to submit your abstract via the online form, contact the NWA office at (405) 701-5167 or e-mail: exdir@nwas.org.

The Program Committee will notify presenters, via e-mail, regarding the disposition of their abstracts by the first week of June. A preliminary agenda will be posted on the NWA website by early August for presenters to review.

Students, please complete the abstract submission form section regarding student awards. If you concur, your presentations will be reviewed by the NWA Weather Analysis and Forecasting Committee members. Monetary awards will be presented to the best oral presentations and posters in undergraduate and graduate student categories.

### Theme

NWA 40th Anniversary – Power of the Past; Force of the Future

### Important dates

April 23: Oral presentation abstract deadline April 30: Poster presentation abstract deadline

### Schedule of Events

Sunday Oct. 18: Broadcast Meteorology Workshop Sunday Oct. 18: Eighth Annual Student Session Oct. 19-22: General Sessions Wednesday Oct. 21: NWA Annual Awards Luncheon

### **Program Chairs**

Program Committee Co-Chairs:

Dr. Patrick Marsh
Techniques Development
Meteorologist
NOAA/NWS/NCEP Storm
Prediction Center
Norman, OK 73072
patrick.marsh@noaa.gov
nwas15@nwas.org

John Ferree
Severe Weather Services
Coordinator
NOAA/NWS Office of Climate,
Water, and Weather Services
Norman, OK 73072
john.t.ferree@noaa.gov
nwas15@nwas.org

### Broadcaster Workshop Program Chair:

Mike Goldberg WTVR-TV Richmond, VA 23230 mgoldberg@wtvr.com Watch the meeting webpage for updates on hotel accommodations, exhibits, and more, or contact the NWA Office at (405) 701-5167 or exdir@nwas.org.

See page 2 for the meeting's social media connections.

### An Opportunity for Professional and Personal Engagement: Making Mentoring Connections On-Line!

By Ken Carey

Members can connect with professionals working across the weather, water, and climate community, sharing their advice on jobs, adventures and extracurricular activities so that you have rewarding and satisfying careers. On this new site, you will find helpful information, and have an opportunity to find out about, develop and grow a relationship with one or more amazing members from across our NWA. Each of these people have shared their

New Mentor Site: http://member.nwas.org/mentor

unique but amazing career story, and who volunteered to "connect" with and help people like you have a professionally satisfying and personally fulfilling career in the weather, water and climate enterprise and profession. Here you will also find resources, such as jobs, upcoming meetings and professional development opportunities, to help you maximize your career and personal successes!

Mentors like these have benefited from others like them who have shared their personal and professional stories, networking activities and perspectives on what kinds of work, interrelationships, and technical, business and management opportunities are worth pursuing. This site is a way for you to start to engage with one of more mentors who want to give back to others who share their passion. Please check out the mentor biographies and personal profiles; if interested to find out more or to start a conversation, send an e-mail, using the "nwas.org" e-mail address, to one or more mentors. The goal is, through this site, to get to know mentors and



Team of mentors at the 2014 Annual Meeting

"connect" on a variety of professional and personal levels, and to open up opportunities with professional and personal growth.

### 2015 NWA sponsored Annual Meetings, Conferences and Special Events (click titles to view websites)

October 17-22: 40th NWA Annual Meeting

The Renaissance Oklahoma City Convention Center Hotel is the host site for the meeting. Meetings will be held next door in the Cox Convention Center. It is our 40th anniversary, so plan to attend this informative meeting and celebration. See <u>page 6</u> for details.

### Other Meetings, Conferences and Special Events in 2015

April 8: National Tropical Weather Conference

This annual conference will be held on South Padre Island, Texas.

April 22: Earth Day

Earth Day marks the anniversary of what many consider the birth of the modern environmental movement in 1970.

May 11–12: 2015 Alaska Weather Symposium

This symposium will be held at the University of Alaska Anchorage Aviation Technology Center, Merrill Field in Anchorage, Alaska.

May 24-30: Hurricane Preparedness Week

Please share hurricane preparedness information in support of the Weather-Ready Nation program.

### August 25-27: The Great Lakes Operational Meteorology Workshop

Forecasting in the Great Lakes area poses interesting and unique challenges.

This workshop will be held in Grand Rapids, Michigan, and is designed to bring forecasters of all experience levels, media partners, and academia together to address the challenges and to share knowledge, experience and techniques. The website will be available soon.

November 13-18: IAEM 63rd Annual Conference and EMEX 2015

The theme is "Expanding the Spectrum of Emergency Management" and the conference will be held in Clark County, Nevada.

The NWA Events page has more information.

SIONAL DEVE

### **Applications Now Open for NWA Scholarships and Grants**

The NWA is pleased to announce that applications are now being accepted for scholarships and

the Sol Hirsch Education Fund Grants.

NWA David Sankey Minority Scholarship in Meteorology – Closes April 15

NWA Dr. Roderick A. Scofield Scholarship in Meteorology – Closes May 14

NWA Broadcast Meteorology Scholarship – Closes May 14

NWA Ken Reeves Memorial AccuWeather Undergraduate Scholarship in Meteorology – Closes May 28

NWA Sol Hirsch Education Fund Grants for teachers and educators of grades K-12 – Closes June 1

Opening soon: MetSat Award (see page 3)



Joyce Scofield and other family members of the late Dr. Roderick A. Scofield generously donate funds to support the Scofield scholarship. The Sankey and Broadcast Meteorology scholarships are funded by NWA members through direct donations and the NWA Annual Meeting Golf Outing and Raffle organized by Betsy Kling. AccuWeather, Inc., a charter NWA Corporate Member sponsors the scholarship honoring the late Ken Reeves. Sol Hirsch's family, friends and many NWA members donate to the Education Fund Grants. The NWA sincerely thanks all who support and promote our scholarship and grant opportunities.

http://nwas.org/committees/ed\_comm/application/index.php

NIT DATIES

April 15: Sankey Scholarship application deadline

April 22: Earth Day

40th Annual Meeting Abstract Deadlines:

April 23: Oral presentations

April 30: Poster presentations



N. 140 011 1D 1

May 14 Scofield and Broadcast scholarship application deadline (see above)



### Newsletter Submissions

We welcome Newsletter article submissions from members. Send articles to <a href="mailto:nwanewsletter@nwas.org">nwanewsletter@nwas.org</a> by the 25th of the month for publication in the following month's edition at the earliest.

Information about the Newsletter and a link to author guidelines can be found at <a href="https://www.nwas.org/newsletters/">www.nwas.org/newsletters/</a>.

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Members receive the Newsletter on-line and access to an on-line portal which includes the Journal of Operational Meteorology as part of their regular, student or corporate membership privileges. Members have access to the <a href="NWA Live Learning Center">NWA Live Learning Center</a> and receive an emailed <a href="Weekly Update">Weekly Update</a> containing relevant news stories.

Address, phone number, email and affiliation changes can now be made online: member.nwas.org.