



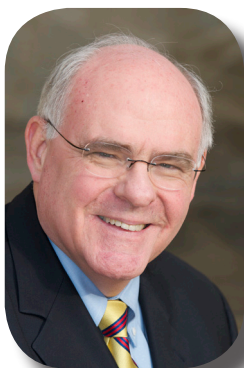
The NWA: Connecting
operational meteorologists
in pursuit of excellence
in weather forecasting,
communication, and
service.

No. 14 – 2

Newsletter FEBRUARY

2014

Thank You Steve Harned!



Steve Harned, NWA Executive Director since 2007, retires on March 1. Steve served the NWA very well as the executive director. He implemented full color and all-electronic publications, developed financial tracking processes that kept the organization financially sound even during tough economic times, and saw the NWA through many technological changes.

Even though Steve has been in the top executive role for seven years, his service to the NWA is not limited to

community, especially the one that leads to his backyard. He is also very excited about volunteering as a Course Marshall on hole 16 at the PGA U.S. Open in Pinehurst, N.C., this June. If any players hit a shot into the gallery, Steve will clear the spectators back to create an opening for the player to hit their next shot.

Steve, a sincere thank you for all of your service to the NWA. We won't say good-bye, because we know you will still be involved in the NWA and be one of our biggest supporters. Best of luck to you and Jeanne in this next phase of your retirement and career.

[Click to learn more about Steve's career in meteorology!](#)

that time. He is a proud charter member of the NWA, was the president in 1992, served as a technical editor for the National Weather Digest, and was coordinator for the 25th Annual Meeting. Steve is very passionate about the NWA, and its benefit to members and the science in general. This is most evident when he is speaking to students and teaching them how the NWA can play a role in their careers.

Steve's retirement from the NWA will not mean he is fully retired. He is an American Meteorological Society (AMS) Certified Consulting Meteorologist and is the owner of a meteorological consulting firm, Atlantic States Weather, Inc., which specializes in providing forensic meteorological services for legal proceedings. His clients have included the U.S. Department of Justice, the N.C. Attorney General's Office, and law firms representing both plaintiffs and defendants in legal cases across the United States, the United Kingdom and Greece.

He will also be spending much more time on the golf course with his newly found spare time. Steve and his wife Jeanne moved to a retirement golfing community near Sanford, N.C., last year. Steve is waiting for the weather to improve so he can master the two golf courses in the



Steve's new home in Sanford, N.C., is on this golf course which was snowed in earlier this month. See story page 5.

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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 – *Open until April 1*

NWA Dr. Roderick A. Scofield Scholarship in Meteorology – *Open until May 16*

NWA Broadcast Meteorology Scholarship – *Open until May 16*

NWA Ken Reeves Memorial AccuWeather Undergraduate Scholarship in Meteorology – *Open until May 31*

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



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 and many NWA members donate to the Education Fund Grants.

The NWA sincerely thanks all who support and promote our scholarship and grant opportunities.

New Publicly Available Model Verification

Faye Barthold

After several years of development, National Centers for Environmental Prediction's (NCEP) Weather Prediction Center (WPC) recently unveiled a new online object-oriented verification resource for 24-hour precipitation forecasts. This verification uses the Method for Object-Based Diagnostic Evaluation (MODE), which is an object-oriented verification technique developed by the Developmental Testbed Center (DTC) as part of their Model Evaluation Tools (MET) verification package.

Object-oriented verification techniques such as MODE are designed to better account for spatial discontinuities between forecast and observed areas of precipitation. This avoids the double penalty problem that can arise when using traditional verification techniques in which a forecast is penalized once for missing the observed area of precipitation and a second time for giving a false alarm. In addition, object-oriented verification techniques can provide more detailed information about forecast quality than can be obtained through traditional verification measures alone. Ultimately, the goal of the MODE tool is to evaluate forecast quality in a manner similar to a forecaster completing a subjective forecast evaluation.

MODE verification is a two-step process:

1. Identify objects in both the forecast and observed fields based on a designated precipitation threshold (0.50 inch, 1.0 inch, etc.).
2. Use object characteristics such as size, angle of orientation, and displacement distance to determine the degree of similarity between objects in the forecast and observed fields.

Objects that are found to be similar to one another are considered matched, while those that are not similar are considered unmatched. Object matching decisions are based on a parameter called the interest value, which combines the various object characteristics into an overall measure of similarity. This value ranges from 0 to 1, with a value of 0.70 required for objects to be considered matched. Unmatched objects in the forecast field

Object-oriented Verification Resource

www.wpc.ncep.noaa.gov/verification/mode/mode.php

See *MODEL*, p. 8

The Importance of Getting Our Message Out

Jeff Craven, NWA President

Most of us became interested in meteorology at a young age after experiencing a significant weather event that impacted our lives and made an impression. Tornadoes, blizzards, floods, and hurricanes are among the type of events that trigger an interest in the atmospheric sciences. I grew up in Oxnard, Calif., so it wasn't one of these events for me. I was interested in natural science, but not specifically weather. Volcanoes, glaciers, and dinosaurs were among my favorites until I turned 12.

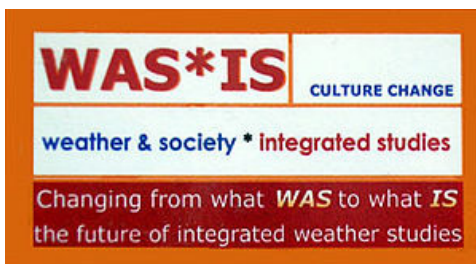
In 1978, my aunt was a small plane pilot, and she could see I was interested in flying. She gave me the book *Aviation Weather*, and told me that weather was one of the most important things I needed to learn to become a pilot. I repeatedly read it cover to cover, wearing it out—and from then on, I knew I wanted to become a meteorologist. I started to notice and study the weather, although the weather was always more interesting somewhere else in the country. The science of weather became important to me in junior high, and grew into a passion through my college years at San Jose State that continues today.

The accuracy of our forecasts are getting better and better. I am truly amazed at just how accurate our forecasts have become and how much detail we can give days in advance of what is about to unfold. But over the past 10 years or so, it has become clear to me that the science of weather forecasting is only one of the necessary skills for a successful operational meteorologist.

What is sobering is that, even with a perfect forecast, the people we serve can still be caught off guard with the impacts, leading to potentially preventable transportation issues, property damage, injuries, and even loss of life. Recent winter weather events in the Deep South continue to provide evidence that even very good forecasts with minimal error don't always catch the attention of or elicit an appropriate response from those that need to make important decisions. Or, they have heard forecasts from the Weather Enterprise but don't fully understand the expected impacts. Our delivery and messaging is very important, but many of us were trained to worry about items like omega, temperature advection, vertical wind shear, and instability. Communicating with and serving customers? I don't

remember taking a course on that to get either of my degrees in meteorology.

So, like many of us, we learned via on-the-job training. Just as we are not trained in K-12 for personal finance and investing, the emphasis on communicating the threats to a non-scientist was non-existent during my college experience. I am excited about ways we as the Weather Enterprise are trying to correct this issue through training and education. Dr. Eve Gruntfest developed Weather and Society Integrated Studies (WAS*IS), and I was fortunate to attend one of the workshops about nine years ago. This has led to increasing emphasis on societal impacts and understanding how people receive and act on forecasts and warnings.



National Oceanic and Atmospheric Administration's (NOAA) Weather Ready Nation (WRN) is an initiative that is a strategic goal of the National Weather Service (NWS), NOAA, and all the way to the Department of Commerce level. WRN is about building community resilience in the face of increasing vulnerability to extreme weather and water events. In a nutshell, it tries to integrate physical science and social science towards improving the way we communicate

weather information. As we know, the private sector and broadcast meteorologists are the workhorses for getting the message out about potentially high impact weather events. I have no doubt that involving the entire Weather

Enterprise is necessary for this to be truly successful.

Therefore I believe the theme for our 39th Annual Meeting is very appropriate: "Building a 21st Century Weather Enterprise: Facilitating Research to Operations – Optimizing Communication and Response." Optimizing communication, or messaging, is a key to assuring an appropriate response from decision makers we support and serve. Abstracts are due in late May, so make sure you take time to submit one soon (please see page 6 for instructions). We are looking forward to seeing a great agenda with presentations from all aspects of the Weather Enterprise highlighting the progress we have been making in this area.

2014 National Awareness Events

Click on the awareness week's title for corresponding website and more information about that week.

Severe Weather Preparedness Week	March 2-8
Flood Awareness Week	Mar 16-22
Tsunami Preparedness Week	Mar 23-29
Air Quality Awareness Week	Apr 28-May 2
Safe Boating Week	May 17-23
Heat Awareness Day	May 23
Hurricane Preparedness Week	May 25-May 31
Rip Current Awareness Week	Jun 1-7
Lightning Safety Awareness Week	Jun 22-28

New NWA Seal of Approval Awardees

Miles Muzio, Broadcast Meteorology Committee Chair

The National Weather Association is pleased to announce a new harvest of the best weathercasters in America. As part of a rigorous evaluation process, the Broadcast Meteorology Committee vets many weather broadcasters each year. The coveted Seal of Approval is only granted to those broadcasters who demonstrate excellence in their understanding and communication of weather information to the public. These six NWA members have passed their assessment and made the grade since August 2013.



Ethan Huston is an award-winning weekday morning meteorologist for WAPT-TV in Jackson, Miss. The Mississippi Associated Press Broadcasters (MAPB) named Ethan's broadcast the "Best Weathercast" in Mississippi in 2013. Ethan's coverage of Hurricane Isaac was part of MAPB's "Best Newscast" for Mississippi in 2012. He also received an Edward R. Murrow award for the continuous

coverage of the monster EF4 Yazoo City tornado that struck central Mississippi in 2010. Originally from Sugar Grove, Ohio, Ethan earned his master's degree in geosciences/broadcast meteorology at Mississippi State University in Starkville, Miss.

Justin McHeffey is a meteorologist and reporter at KCNC in Denver. He joined CBS4 in 2012. Justin spent two years in Minot, N.D., forecasting softball-sized hail, tornadoes, blizzards and flooding on the northern Plains prior to coming back to his native Denver. He received a bachelor's degree in anthropology from the University of Montana and went on to earn a master's degree in mass communication from Arizona State University. In 2013, Justin graduated from Mississippi State University with a certificate in Broadcast Meteorology. He also studied abroad in Australia to learn about native traditions, ecology, and marine biodiversity. Justin grew up in Evergreen, Colo., and enjoys skiing, camping, windsurfing, trying new restaurants, and playing bluegrass guitar.



Joshua Eachus is a meteorologist at WBRZ in Baton Rouge, La. Josh covers breaking weather events as well as the morning and noon weathercasts. He joined WBRZ in September 2013. Josh is originally from just south of Philadelphia and attended California University of Pennsylvania, graduating with a bachelor's degree in meteorology. In 2007 and 2008, he presented

his personal undergraduate research at the NWA Conferences. He previously worked as a meteorologist and reporter in Stubenville, Ohio/Wheeling, W.Va., from 2011 to August 2013. During his time there, Josh was a member of the AP Award winning best "Team of Meteorologists." He also worked as an adjunct professor with the Bethany College Department of Communications teaching public speaking, sports broadcasting and broadcast news. In his spare time, he enjoys golfing and watching professional and college football, and is a die-hard Philadelphia Flyers hockey fan.

948 NWA Seals have been awarded since 1982. Currently 508 Seals are active. Hearty congratulations go out to these six new worthy members of the NWA Seal family.



Michael White is the morning meteorologist at WALA-TV Fox10 in Mobile, Ala. He's been with Fox10 since 2009 and won his station an Emmy for coverage of the Christmas Day 2012 tornado in Mobile. Michael recently provided extensive coverage of the winter storm that hit the Gulf Coast last month. He's a graduate of the University of Alabama and Mississippi State University, and is an avid football fan.

Seals continued p. 5



Brian Hutton currently serves as chief meteorologist at WTOK-TV in Meridian, Miss. He began his career as a part-time weekend meteorologist at WTOK in January 2011 and has served as the weekend and morning meteorologist, covering everything from snow and ice to hurricanes and tornadoes. Brian is a native of Johnstown, Pa., and enjoys the challenge of forecasting snow. Brian holds a master's degree in broadcast meteorology from Mississippi State University and a bachelor's degree in meteorology from California University of Pennsylvania. When not tracking the weather, Brian is home with his wife Jenny, golden retriever mix Yogi, and boxer Max.



Ken Meehan is the chief meteorologist at WDTV and WVFX in Clarksburg, W.Va. He developed his love for weather while living in central Oklahoma in the mid-1980s. Ken graduated from Penn State in 1998 and worked for Accuweather through the summer of 2001. He later received his master's degree in Geosciences from Mississippi State University in 2009. Ken is an avid bowler and aspiring actor.

Golf Game Interrupted

The winter of 2013-2014 has certainly been an extreme one for much of the country. Retiring NWA Executive Director Steve Harned wanted to share his observations during the extended southern winter event of Feb. 10-14 in his home town of Sanford, N.C., 50 miles southwest of Raleigh. Having lived in the south for much of his 65 years, Steve said he had not experienced such an extended period of high impact winter weather since the historic March 1960 extended winter events when he was in grade school.

Light snow and rain fell on Feb. 10, two inches of snow fell on Feb. 11, and Feb. 12 saw five inches of snow accumulate in four hours, followed by ½ inch of sleet, then ¼ inch of freezing rain within an 18-hour period. Finally, on Feb. 13, another inch of snow fell. The photo on page 1 is of the green on hole number five of the Carolina Trace Creek Course in Sanford taken on the morning of Feb. 14, about a pitching wedge distance from Steve's house. Obviously, his scheduled golf game for this day was cancelled.

NEW JOM PAPERS

Three papers have been published the NWA's Journal of Operational Meteorology (JOM) since the beginning of 2014, and more are being prepped for publication. Thank you to the JOM authors, reviewers and editors for continuing to make the JOM a success.

JOM 1: Extensive observations of the transition region of a winter storm, by T. A. Coleman, T. A. Murphy, K. R. Knupp, L. D. Carey, and M. E. Anderson.

JOM 2: The 5 June 2012 central Montana tornado event, by A. E. Cohen, M. L. VanDenHeuvel, G. W. Carbin, and D. Bernhardt.

JOM 3: Dual-polarization radar analysis of northwestern Nevada flash flooding and haboob: 10 June 2013, by D. T. Myrick and J. R. Michael.

You can read the papers by logging on to the NWA Member Portal at member.nwas.org and clicking on JOM link under Additional Member Resources on the right. If you are interested in submitting a paper to JOM, go to www.nwas.org/jom/index.php for author information.

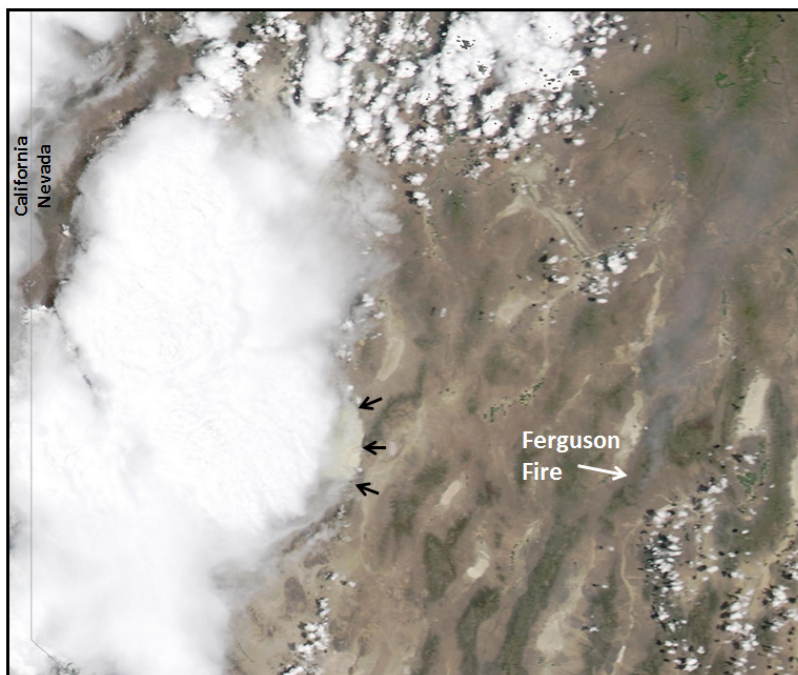


Figure 10 in JOM 3 showing a satellite image over northwestern Nevada at approximately 2115 UTC June 10, 2013. Black arrows denote the location of the haboob. Image courtesy of the Space Science and Engineering Center at the University of Wisconsin-Madison [ge.ssec.wisc.edu/modis-today/index.php].

39th NWA ANNUAL MEETING

Salt Lake City, Utah: 18–23 October 2014

CALL FOR ABSTRACTS!

Where:

The meeting sessions will take place at the Sheraton Salt Lake City Hotel, 150 W 500 S, Salt Lake City, UT, 84101.

<http://www.sheratonsaltlakecityhotel.com/>

Theme:

***“Building a 21st Century Weather Enterprise:
Facilitating Research to Operations – Optimizing
Communication and Response”***

Among the greatest challenges for the Weather Enterprise in the 21st century is to produce the highest level of science-based hazard information, while at the same time communicating the associated uncertainty, impacts, and risks in a manner that results in the maximum benefit to society. Events such as the Moore and El Reno tornadoes in Oklahoma and the Yarnell Hill and Rim wildfires in the Western U.S. highlight the need for both excellent forecasts and effective communication. The results from innovative research must be efficiently transferred to governmental and commercial providers of environmental information services. Additionally, forecasts must be effectively communicated in a manner that elicits an informed response by private citizens, organizations, businesses, and emergency managers and other first responders. Given these challenges, the focus of the 2014 NWA Annual Meeting will be to share research results that can improve operations and on communication platforms and methods that promote appropriate societal response.



Important Dates:

May 31: Abstracts for Oral presentations due

June 7: Abstracts for Poster presentations due

Oct. 18–23: The 39th NWA Annual Meeting

Schedule of Events:

Sunday, Oct. 19: The annual Broadcast Meteorology Workshop

Sunday, Oct. 19: The Seventh Annual Student Session

Oct. 20–23: The general sessions

Wednesday, Oct. 22: The NWA Annual Awards Luncheon

Abstract Submission:

Submit abstracts for oral presentations by May 31 and abstracts for poster presentations by June 7.

Abstracts should be sent via the online form on the NWA website at: www.nwas.org/2014abstracts.php. If you are unable to submit your abstract via the online form, contact the NWA office at 405-701-5167 or email: exdir@nwas.org.

The Program Committee will notify presenters, via email, regarding the disposition of their abstracts by July 18. 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.

Contacts:

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Randy Graham

Science and Operations Officer

National Weather Service Forecast Office

Salt Lake City, UT

annualmeeting@nwas.org

Broadcaster Workshop Program Chair:

Mike Goldberg

WTVR-TV

Richmond, VA 23230

mgoldberg@wtvr.com

For more information on exhibits, special accommodations, registration and the overall meeting program, keep checking the 2014 Annual Meeting Page (<http://www.nwas.org/meetings/nwa2014/>) or contact the NWA office at 405-701-5167 or exdir@nwas.org.

NWA will provide updates on-line, on the NWA Facebook Page, Twitter and other social media. Please use the hashtag #NWA14 for any tweets associated with the 2014 Annual Meeting.

Newsletter Submissions

We welcome Newsletter article submissions from members. Send articles to nwanewsletter@nwas.org 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 <http://www.nwas.org/newsletters/>.



NWA sponsored Meetings, Conferences and Special Events (*Click titles for more!*)

March 1: Third Annual Severe Weather Awareness Day

The Middle Tennessee Chapter of the NWA and the Nashville NWS Forecast Office are holding this conference in Nashville, Tenn, to remember the 40th Anniversary of the April 3, 1974, Super Outbreak. The Ohio Valley NWA Chapter is also a participant.

March 7–9: 39th Annual Northeastern Storm Conference

The Lyndon State College Chapter of AMS and NWA will sponsor this conference at the Holiday Inn in Rutland, Vt.

March 27–29: 18th Annual Severe Storms and Doppler Radar Conference

Sponsored by the Central Iowa NWA Chapter, it will be held at the Courtyard by Marriott in Ankeny, Iowa.

April 4–5: 12th Annual Southeast Severe Storms Symposium

Sponsored by the East Mississippi Chapter of NWA/AMS will be held in the Palmeiro Center on the Mississippi State University Campus.

Aug. 6–7: 16th Annual High Plains Conference

The High Plains Chapter of the AMS and NWA sponsor this event. Abstracts are being accepted. The conference also includes invited speakers. Students who present at the conference have their registration fees waived and are eligible for awards.

Oct. 18–23: 39th NWA Annual Meeting

It will be held in Salt Lake City, Utah (#nwas14), at the downtown Sheraton Hotel. See page 6 for details.

Other Meetings, Conferences and Special Events

March 15: Central Indiana Severe Weather Symposium

This biennial day-long symposium is geared toward providing advanced training for spotters and weather enthusiasts. With attendance growing, it now will be held at Butler University in Indianapolis, Ind.

April 7–10: International Weather Radar and Hydrology Symposium

Organized by the Environmental & Water Resources Institute of the American Society of Civil Engineers, it will be in the Washington D.C. area.

April 9–13, 2014: National Tropical Weather 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, and more. NWA Seal holders can receive CEUs for attending.

April 14–17: 2014 National Hurricane Conference

This annual conference will be held at the Hilton Orlando in Orlando, Fla.

May 28: 35th Anniversary Colloquium: Advances in Extratropical Cyclone Understanding and Prediction Since the 1979 Presidents' Day Storm

It will be held at National Oceanic and Atmospheric Administration's Center for Weather and Climate Prediction in College Park, Md.

Nov. 3–7: 27th Conference on Severe Local Storms

It will be at the Madison Concourse Hotel in Madison, Wis. The abstract submission deadline is July 1.

New NWA Members in January 2014

Regular/Military/Retired

William Alexander
Michael Estwick
Denise Isaac
Jonathan Jennings
Michael Joyce
Despina Karras
Melissa Nord
Patrick Paddick
Edward Rozak
Kent Hornsby

Students

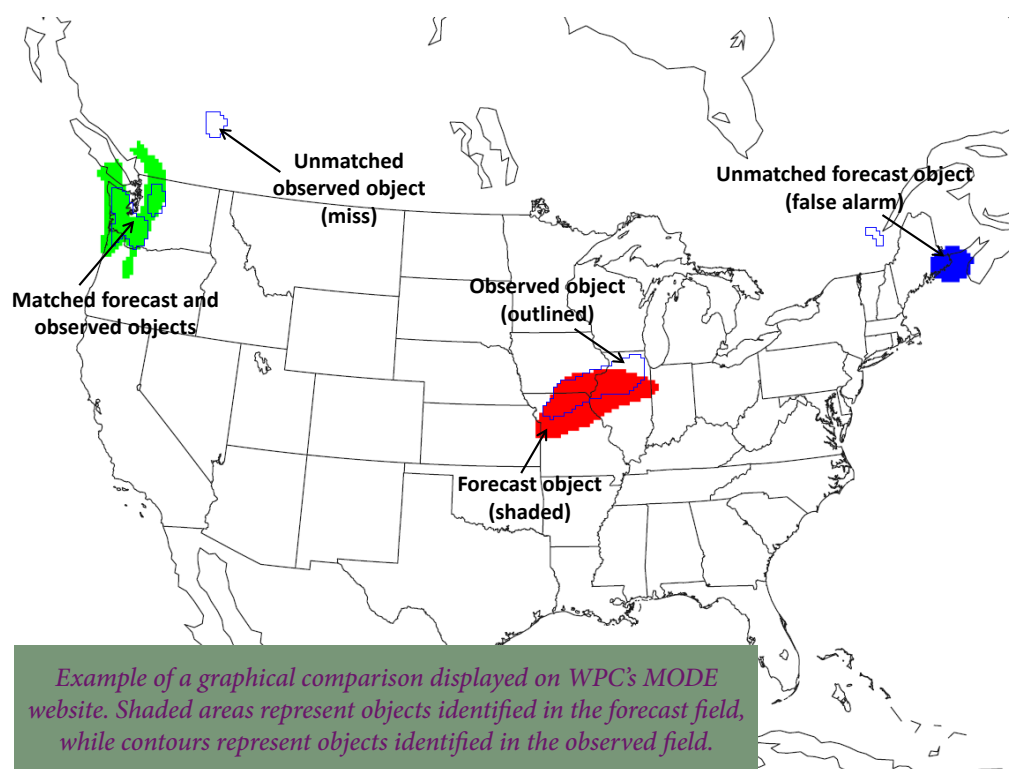
Kadir Goz
Jennifer Henley
Alex Herbst
Nicole Lehtola
Kyle Morris
Taylor Pannell
Chelsy Richley
Cody Bailey
Jacob Sojda
Jeff Szkodzinski
Sheana Walsh
Andrew Whitmyer
Miguel Angel Labiano

MODEL from p. 5

are equivalent to a false alarm. Unmatched objects in the observed field are equivalent to a miss.

WPC's MODE website displays a graphical comparison between 24-hour precipitation forecasts and the corresponding observed precipitation (see figure). Preliminary verification is based on NSSL's Multi-Radar/Multi-Sensor system (www.nssl.noaa.gov/projects/mrms/) radar-derived precipitation observations and is available the same day. The final verification is based on NCEP's Stage IV (www.emc.ncep.noaa.gov/mmb/ylin/pcpanl/stage4/) precipitation observations and is available two days later. In addition to the graphical comparisons, the page also displays statistical information for each matched object. Verification is available for Day 1, Day 2, and Day 3 precipitation forecasts of 0.50, 1.0, and 2.0 inches from WPC and several numerical models, including the NAM and GFS.

In addition to the information provided on WPC's MODE verification page, additional information about MODE and the MET verification package is available at: www.dtccenter.org/met/users/.



IMPORTANT DATES

April 1:

Deadline for David Sankey Minority
Scholarship application

May 31:

Deadline for Annual Meeting oral
presentation abstracts

June 7:

Deadline for Annual Meeting poster
presentation abstracts

Oct. 18-23:

39th NWA Annual Meeting

See [page 7](#) for more important dates

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Instruction for Authors at [http://www.nwas.org/newsletters/
newsletter_instructions.php](http://www.nwas.org/newsletters/newsletter_instructions.php).

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.

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