

# Aware

Aware's purpose is to enhance communications  
within the National Weather Service  
and with the natural hazards community

Summer 2002

## Climate, Water, Weather

### NWS Improves Quality Control for Customers

Location, Location, Location is the mantra of the Real Estate industry. Quality, Quality, Quality is the mantra of the National Weather Service (NWS). During the month of June, the NWS reinforced its commitment to quality control and partner satisfaction at two partner forums.

On June 28, NWS held its annual Partners Meeting in Silver Spring, MD. Some 23 representatives from government and industry took part in the 1-day session.

NWS Performance and Awareness Division Chief Don Wernly hosted the meeting and gave the keynote presentation, *NWS and Quality Control of Products and Services*. Additional topics included:

- AWIPS Upgrades/Milestones
- Valid Time Event Code (VTEC)
- Communications between NWS and its Partners.

The common thread through the meeting topics was quality control. Action items from the meeting included:

- Developing a QC feedback process for partners
- Notifying partners when experimental products will be available for comment
- Updating the current VTEC Web site more frequently
- Adding the partners to the NOAAport email list
- Providing a readable NOAAport products list
- Creating a new email list server to encourage more frequent exchange of information.

On June 25-28, the American Meteorological Society held its 31<sup>st</sup> Conference on Broadcast Meteorology in Williamsburg, VA. Fire and Public Weather Branch Chief James Lee provided a balanced discussion for the audience. Several presentations focused on the NWS quality control programs as well as future directions of the NWS. On June 28, Lee took part in the NWS Partners Meeting and helped build a consensus on quality control at both meetings where NWS partners were present.


After listening to partners at these meetings, NWS modified its principles of quality control across the organization. NWS senior managers were briefed on the les-

sons learned regarding quality control. NWS is aware of coding and formatting errors and noncompliance to policy and procedures that impacts customers who use automation to disseminate information. NWS plans new quality control capabilities for AWIPS.

Coding and formatting errors affect the NWS verification databases. NWS has made changes to the verification program to better define what data can be imported into the database; the regions are providing guidance to field offices on how to reduce errors. The update included the use of the WARNGEN software and emphasized the need to follow existing policy and not hand edit warnings.

The customer feedback process is important to NWS. NWS will present a quality control update to our partners at the NWS Family of Services session at the AMS annual meeting, February 9-13, 2003.

If you have a topic for this meeting, contact NWS Outreach Program Manager Ron Gird at 301-713-0090 x154 or [ron.gird@noaa.gov](mailto:ron.gird@noaa.gov). We are always ready to respond.

  
Gregory A. Mandt  
Director, Office of Climate, Water,  
and Weather Services

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## September COOP Meeting Focuses on Modernization

On September 18, NOAA will hold the Cooperative Observer Program Modernization Partners' Forum: *Building a National Observing Capability for the Future*. The event takes place at the Doubletree Hotel in Rockville, MD. The meeting is co-sponsored by NWS, the National Environmental Satellite, Data and Information Service, and the Office of the Federal Coordinator for Meteorology.

This workshop provides an opportunity for NOAA's customers of in situ weather and climate data to talk to the NOAA technical managers who oversee the planning and implementation of COOP modernization.

The goals of the workshop are to provide users of COOP data with detailed information on the technical proposal for modernizing the COOP network and to allow direct interaction with NOAA COOP management personnel to provide their input.

For more information, including the location, agenda and registration, is online at <http://lwf.ncdc.noaa.gov/oa/climate/COOP.modernization.html>. There is no fee for this conference, but space is limited. Please limit participation to one representative per organization or company, when possible. Questions? Contact Robert Leffler at (301) 713-1970 ext. 134 or email [robert.leffler@noaa.gov](mailto:robert.leffler@noaa.gov)

*Barbara Mayes, Climate Services Division  
barbara.mayes@noaa.gov*

## Aware

Office of Climate, Water, and Weather Services  
National Weather Service, W/OS5  
Silver Spring, MD 20910  
Gregory Mandt, OCWWS Director  
Ron Gird, NWS Outreach Manager  
Linda Kremkau, Managing Editor  
Melody Magnus, Editor  
Mailing List Changes: [Linda.Kremkau@noaa.gov](mailto:Linda.Kremkau@noaa.gov)  
Articles: [Melody.Magnus@noaa.gov](mailto:Melody.Magnus@noaa.gov) or  
Questions? Melody Magnus: 301-713-1833 x182

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AwareNow—[www.nws.noaa.gov/om/awarenow.htm](http://www.nws.noaa.gov/om/awarenow.htm)

## Weather Support on Wildfires: Real Team Effort

I recently served an 18-day tour as an Incident Meteorologist (IMET) on wildfires in western Colorado. As the IMET, it's my job to provide accurate site-specific weather forecasts for the area being consumed by wildfire. I also monitor the weather throughout the day and communicate to the folks on the fire line if adverse phenomena such as wind shifts, thunderstorms or even heavy rain are approaching.

I work closely with the Incident Management Team and advise them on how the weather may impact suppression strategies and objectives. Firefighter safety is the top priority on all wildfire incidents.

Protecting resources such as homes, valuable timber stands, watersheds, agricultural tracts and archaeological sites are other typical goals. Wildfires can strip the steep hillsides adjacent to communities of all vegetation. Flash flooding and mud slides can be a major hazard for years after the last flames have been extinguished.

Serving as an IMET is a major challenge, but it goes a lot smoother if the local Weather Forecast Office (WFO) provides solid support. That is exactly what I received from the WFO in Grand Junction, CO. Not only did they provide accurate routine fire weather zone forecasts, but they also took the time to coordinate all fire weather watch/red flag warning products. I received courtesy calls on radar's status when untimely radar outages occurred. They are never timely when thunderstorms are approaching your wildfire area. The office also had a useful fire weather Web site that allowed me to do one-stop data monitoring.

The outstanding support I received from the WFO in Grand Junction allowed me to provide a similar level of on-site weather support to the folks on the fire line. The direct result was that no major problems nor injuries occurred on either the Coal Seam or Spring Creek wildfires during my tour. Many thanks to the fine folks at the WFO in Grand Junction for a job well done under the duress of a record wildfire season!

*Chris Maier, WCM, WFO Juneau, AK  
chris.maier@noaa.gov*

## Heat/Drought

### Wisconsin Killer Exposed in Heat Awareness Event

Heat is the number one weather-related killer in Wisconsin, claiming 194 lives, directly and indirectly, since 1982. To combat the threat, WFO Milwaukee, WI, launched Wisconsin's first-ever Heat Awareness Day on June 20.

This awareness day was co-sponsored by NWS, the Wisconsin Department of Health and Family Service and the Wisconsin Emergency Management. As WCM in Milwaukee, I worked closely with these groups and the Milwaukee Health Department to develop handout material and heat-related statistics. The packet was sent to all Wisconsin County Emergency Management Directors, county health departments, county Sheriff offices and more than 500 TV stations, radio stations and newspapers across the state.

The work culminated in a press conference on June 20. All TV stations in the Madison and Milwaukee markets, and several other stations across Wisconsin, allotted time for heat-related segments during their newscasts. WCMs servicing Wisconsin developed four Public Information Statements to broadcast on NOAA Weather Radio (NWR).

Wisconsin area Emergency Managers and NWS offices conducted at least 18 media interviews. In addition, many newspapers across the state published stories on the event.

*Rusty Kapela, WCM, WFO Milwaukee, WI  
rusty.kapela@noaa.gov*

*NOAA's degree-day information is one of a number of inputs to the "weather derivatives" industry which began in 1996 and has issued weather risk management instruments with a notional value of more than \$7 billion in the 4-year period of 1997-2000.*

Source: Price Waterhouse Coopers 2001 study prepared for Weather Risk Management Association.

Note: the term notional value: is a bit awkward, but is understood in the context of the industry. In layman's terms, the "notional value" is analogous to the death benefit of a life insurance policy as oppose to the premium paid for the policy.

## Hydrology/Flooding

### Flash Flood Workshop Scheduled for August 27-29

The NWS Hydrologic Services Division will hold a Flash Flood Workshop in Boulder, CO, August 27-29. The workshop will be conducted in the University Corporation for Atmospheric Research Auditorium and will center on a variety of internal and external flash flood programs and services. Up to 80 individuals are expected to take part.

The Advanced Hydrologic Prediction Services (AHPS) will be demonstrated and a customer survey will be discussed to better define a consistent core suite of graphical AHPS products. The workshop also will cover user needs, such as hydrologic text products and dissemination methods to properly protect life and property.

The first day of the workshop will feature eight guest speakers, including presentations from local, state and federal partners. The second day will shift to WFO Hydrometeorological Decision Assistance Tools. Day 3 will focus on office application issues and Quantitative Precipitation Forecasts followed by discussion. Participants will have access to a workshop summary and list of action items after the workshop concludes.

For more information, go to: <http://www.nws.noaa.gov/om/flashflood/workshop/2002FFW.shtml>.

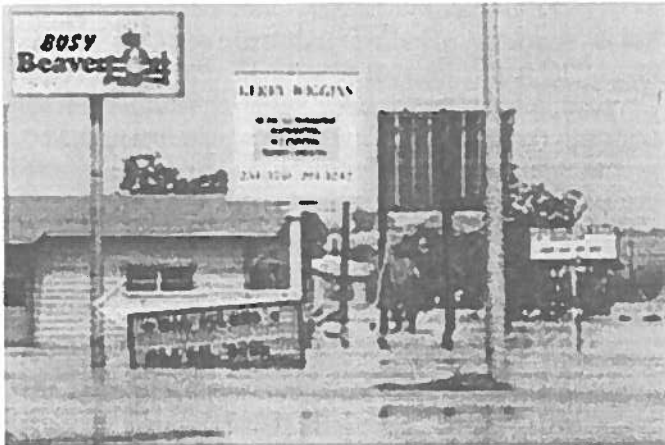
*Kevin Lynott, Hydrologist, HSD  
kevin.lynott@noaa.gov*

### Texas Size Floods Stretch Lone Star Staff

Torrential rains, starting Saturday, June 29, extended for a week and totaled as much as 2-3 feet in parts of south-central Texas, in particular the Texas hill country northwest of San Antonio. Significant flooding affected more than 80 counties, with most extensive flooding concentrated in the San Antonio area. River levels reached record heights. Crests ranged as high as 30-40 feet above flood stage. Locations with record and major flooding as well as other graphics can be found at: [http://www.nws.noaa.gov/oh/hic/current/TX.July\\_2002.shtml](http://www.nws.noaa.gov/oh/hic/current/TX.July_2002.shtml).

Additional information on this event is available from WFO Corpus Christie: [http://www.srh.noaa.gov/crp/hydrology/flood\\_2002/July/default.html](http://www.srh.noaa.gov/crp/hydrology/flood_2002/July/default.html).

The Governor called out the National Guard to help with rescues and evacuations. Pockets of heavy rain also caused flooding in western parts of Texas, including Abilene, where 12-14 inches of rain fell. Heavy rain caused Lake Brownwood to overflow, flooding a portion of the City of Brownwood and resulted in evacuations.



The event caused 9 fatalities and damaged more than 48,000 homes as well as roads, bridges and buildings. Governor Perry indicated damages may be \$1 billion. At least 5,000 people were asked to evacuate their homes — many more fled voluntarily.

WFOs San Antonio, Corpus Christi, Houston, Fort Worth and Brownsville briefed local Emergency Management Coordinators, media outlets and the general public on the weather and river conditions expected.

NWS Southern Region Regional Operations Center (SR-ROC) provided a 24 hour one-stop source for weather information to organizations such as FEMA, Texas Department of Emergency Management and the Red Cross. The SR-ROC took information originating from the WFOs to provide a cohesive message to these regional and national users so they could make important decisions concerning manpower and resource allocation.

*Kandis Boyd, Hydrology Program Manager  
NWS Southern Region Headquarters  
kandis.boyd@noaa.gov*

*Joanna Dionne, Meteorologist,  
Hydrologic Services Division  
joanna.dionne@noaa.gov*

## Hurricanes/Tsunamis

### First Year of 5-Day Hurricane Forecasts Shows Strong Product

The National Hurricane Center is in its second year of in-house, 5-day forecasts of Atlantic and eastern North Pacific tropical cyclones. At the end of the 2002 hurricane season, NWS will evaluate the experimental forecast results in terms of forecast accuracy and customer needs.

Statistics from the first year indicate, if implemented, the 5-day forecast would be more accurate than the 3-day forecast introduced in the 1960s; however, 1 year of statistics is a small sample. If success is maintained this year, we will have more confidence in this product's ability to increase public safety during tropical cyclone season.

The increase in coastal populations necessitates longer lead times for evacuations and emergency measures. This second year of the experiment should give NWS and its customers confidence that the NWS can provide a valuable new product.

*Scott Kiser, Tropical Cyclone Program Manager  
scott.kiser@noaa.gov*

### Hurricane Video Helps Public Prepare for Tropical Storms

The video *Hurricanes . . . Prepare for Nature's Fury* has been distributed to all NWS offices. This 24-minute educational video covers how tropical cyclones form, the hazards they bring and how to prepare for a hurricane. Created in partnership with NOAA's Video Studio, this video is ideal for schools, clubs, emergency management and the general public. Each regional office has an "open captioned" copy available for video equipment not able to display the closed captioned copy provided. We are very interested in any feedback.

We quickly ran out of our first set of copies and are now distributing more copies to NOAA offices. Due to lack of funds, distribution outside NOAA is limited. For agencies wishing to obtain copies, contact Video Transfer

Inc. The more you order, the lower the unit price. To obtain copies, contact:

Video Transfer Inc.  
5800 Arundel Ave.  
Rockville MD 20852  
Phone: 301-881-0270  
Fax: 301-770-9131  
Email: vidtrans@erols.com

*Scott Kiser, Tropical Cyclone Program Manager  
scott.kiser@noaa.gov*

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## Acoustic Sensing Methods May Improve Hurricane Prediction

Unnecessary hurricane evacuations can cost coastal areas millions of dollars. Yet warnings that come too late can cost lives. Evacuation inaccuracies occur because satellites, which can accurately detect and locate storms, are less successful at determining the storm's destructive power and wind speeds.

To improve hurricane assessment, MIT Sea Grant researcher Nicholas Makris is developing methods to provide critical storm data.

Based on the fact that underwater sound waves can provide useful information for hundreds of miles, Makris's project examines whether hydrophones deployed on the ocean floor can gather acoustic data to better predict hurricanes. Single hydrophones, placed strategically under the ocean, could record the sound associated with high winds and then provide accurate information about the hurricane's power.

The research includes modeling and at-sea experiments using hydrophones. First, Makris and his team developed a model for application in high-risk parts of the world, like the Bay of Bengal.

Next, they will collect existing underwater acoustic data from the U.S. Navy's SOSUS underwater listening stations to see if that data can acoustically track and classify hurricanes.

Finally, the team will deploy an autonomous underwater vehicle (AUV) during a hurricane to take measurements of its own. The AUV would travel to the bottom of the ocean, beneath the hurricane, and take single-point measurements of the noise level. Since the intensity of underwater noise grows with wind speed, the team can use this information to find the storm's power.

It's important to know ambient noise levels first, however, so Makris and his team will begin by finding these levels in local waters. The collection of information should indicate whether using underwater acoustic sensing techniques is a reliable, inexpensive method for predicting hurricane strength.

For further information, contact Nicholas Makris, Associate Professor, Department of Ocean Engineering, MIT. Email: makris@mit.edu

*Ben Sherman, NOAA National Sea Grant College*

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## Tsunami Forecasting Protects Hawaiian Residents, Islands

When a tsunami strikes areas of the Pacific Basin, the results can be devastating. The huge floods endanger residents, homes and businesses with little or no warning. In the past decade, 10 major tsunamis have killed more than 4,000 people in the Pacific Basin.

Researchers from Hawaii Sea Grant are working to improve prediction methods for tsunamis to prevent the disruption and damage they cause. In the first phase of this two-part study, Michelle Teng and Kwok Fai Cheung developed a tsunami height forecast model specifically for Hawaii in collaboration with Philip Liu from Cornell University.

This model was based on the existing Cornell COMCOT tsunami model but was modified to be specifically applicable to Hawaii by considering the steep drop off, terrain roughness and vegetation of the Hawaiian coast. This model may help add accuracy to the current warnings in Hawaii.

In the next step, Teng and Cheung will test the computer simulation models to develop a risk assessment methodology. Using the models, they will predict the risk of tsunamis to different coastal areas in Hawaii. Also identified will be the locations most vulnerable to tsunami attacks and the worst tsunami scenarios for locations throughout Hawaii.

The results should help scientists, government and emergency agencies to gather accurate information quickly should a tsunami occur.

For further information, contact Professor Kwok Fai Cheung, Department of Ocean and Resources Engineering, University of Hawaii. Email: cheung@oe.soest.hawaii.edu.

*Ben Sherman, NOAA National Sea Grant College*



## Hurricane Hunter Plane Toured by 400 6th Grade Students

On May 7, WFO Houston/Galveston hosted over 400 6th grade students at Ellington Field to tour the WC-130 Hurricane Hunter Aircraft. As students arrived at Ellington, they received a weather briefing by a WFO meteorologist on tropical cyclones of the upper Texas coast. The students were then given a first hand look at a helicopter used by the U.S. Coast Guard in rescues during Tropical Storm Allison last June and the Hurricane Hunter aircraft. Students also had a chance to explore the mobile Emergency Communication centers provided by the Houston and the Harris County Sheriffs Department. At the end of the tour, the students were treated to some shade and water provided by Reliant Energy. Also sharing expertise were the American Red Cross and Pasadena Amateur Society.

Sandy Peck, Science Magnet Program Coordinator at Clear Creek School, commented, "Yesterday was great! The kids enjoyed the morning, and they will remember it. The information they received was very good and the organization of the event made it easy for us to see and experience everything. Thanks for inviting us. If there is anything else we could attend, please don't hesitate to let me know."

*Gene Hafele, WCM, WFO Houston, TX  
gene.hafele@noaa.gov*

## Marine Services

### AWIPS to Gain Forecasting and Evaluation of Seas and Lakes

National, regional and NCEP representatives of the Marine and Coastal Working Group for AWIPS Applications worked closely with the software developers to provide detailed input on design requirements for the System on AWIPS for Forecasting and Evaluation of Seas and Lakes (SAFESEAS).

This application will be used as a decision assistance tool for monitoring maritime observations, analyses and forecasts at marine WFOs and marine centers. Alpha site(s) for the initial prototype version will be considered in fall 2002. The SAFESEAS prototype is planned for Operating Build 2.

*Richard May, Assistant Marine Program Manager  
Marine and Coastal Branch  
richard.may@noaa.gov*

### National Marine Verification Program Moves to Office of Services

The Office of Services (OS) is reproducing the National Marine Verification Program (NMVP), run by NCEP's Environmental Modeling Center. The move represents Phase 1 in NMVP's move to OS. NMVP will move in 3 phases:

- Phase 1: Software extraction of marine forecast elements and observations into the OS database; should be operational on September 2002.
- Phase 2: Move forecasts and observations data back to 1994; should be deployed in September 2003
- Phase 3: Move back model data. TBD

The long-promised "stats-on-demand" real-time verification Web site, with the most advanced skill scores, should be online between Phase 1 and Phase 2.

*Richard May, Assistant Marine Program Manager  
Marine and Coastal Branch  
richard.may@noaa.gov*

## NWS and Partners Collaborate to Improve All Hazards NWR Services

NWS is working to enhance the capabilities of NWR to broadcast warnings and emergency information for both natural hazards, such as tornadoes, floods and hurricanes, and technological disasters, such as chemical or biological releases, train derailments, terrorism.

NWR is already being used to broadcast civil emergency messages at the request of local government officials. Under the Federal Response Plan, NOAA has the responsibility to "provide public dissemination of critical pre- and post-event information over all-hazards NOAA Weather Radio."

Joe Allbaugh, Federal Emergency Management Agency Director, express[ed] support for using NWR for civil emergency messages involving all hazards. "We owe it to the public, as stewards of public safety and of tax dollars, to make maximum use of that capability," said Allbaugh.

### Implementing New EAS Event Codes

In May 2002, the Federal Communications Commission amended the Emergency Alert System (EAS) rules to add new event codes. These new codes will be implemented on NWR in 2003 with months of advance notice after broadcasters have the opportunity to upgrade EAS encoder/decoder equipment. An overview of NWS plans to implement the new codes is online at [http://www.nws.noaa.gov/om/NWS\\_EAS.html](http://www.nws.noaa.gov/om/NWS_EAS.html).

### AMBER Alerts

Next year, the NWS will be positioned to relay "Child Abduction Emergency" messages, commonly known as AMBER alerts, on our various dissemination systems, including NWR when requested by law enforcement officials. "Child Abduction Emergency" is one of the new EAS event codes. Currently, some local and state EAS plans include provisions for AMBER alerts, using the currently available "Civil Emergency Message" EAS code. In those areas, NWS offices have relayed AMBER alerts over NWR, according to those EAS plans.

### Partnerships

The NWS is developing new partnerships with the public and private sector to increase coverage and efficiency for disseminating emergency messages through NWR. The NWS and the U.S. Department of Agriculture's (USDA) Rural Utilities Service, have identified new locations to extend NWR coverage to rural areas.

Last year, the USDA received a \$5 million grant authority to fund new transmitters. As of July 2002, 52 new transmitters have been funded. The NWS is also working with weather radio manufacturers, technology groups, and the Partnership for Public Warning to increase the capability of NWR. With future investments and innovative partnerships, NWR can continue to expand coverage, and deliver faster, more effective warnings to the public.

*Dave Holst, Program Analyst, OS  
David.Holst@noaa.gov*

## New Voices on NOAA Weather Radio

After much anticipation, the new NOAA Weather Radio (NWR) automated voices are being heard on NWR stations across the country. At the end of April, each NWS office received the new Voice Improvement Processor (VIP) hardware and software needed to generate the new male and female voices, named Craig and Donna, respectively.

Individual forecast offices decided whether to use the male, the female, or both voices, in their broadcast. Offices introduced the new voices on the air at different paces. One reason for the staggered implementation is each WFO must adjust pronunciation of words, especially local place names, in the software before going on the air. If you are not yet hearing the new voices on your local NWR station, contact your local office to see what the schedule is. You can listen to sample messages online at <http://www.nws.noaa.gov/nwr/newvoice.htm>.

If you hear a word or local place name mispronounced, contact your local NWS office to let them know so they can try to improve the pronunciation.

The NWS Voice Improvement Processor text to speech application, developed by SpeechWorks International of Boston, MA, has been nominated for the second Annual Speech Solutions Award, sponsored by Speech Technology Magazine.

The NWS project is nominated in the Best Text to Speech Solution/Telephony category. Visit the Speech Technology magazine's Web site at <http://www.speechtechmag.com/submissions/awards2002.html> to cast your vote for the NWR voice automation project. The winners will be honored at SpeechTEK 2002, to be held at the Marriott Marquis in New York City, October 29–November 1, 2002.

For more information about NOAA Weather Radio, visit your local NWS office's web page, or the national NWR web page at: <http://www.nws.noaa.gov/nwr>.

*Chris Alex, OCWWS Dissemination Services Program  
christine.alex@noaa.gov*

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## Hospitals Gain NWRs Thanks to Local Sponsor

Thanks to the generosity of Steve Johnson, a local business owner and weather enthusiast, all primary health care facilities in Interior Central California received an NWR in July.

The distribution was done in coordination with Lee Adley, Region V Chairman of the Medical Disaster Response Committee. More than 40 facilities received these Specific Area Message Encoding NWRs. In combination with "Project Alert" 5 years ago by WFO San Joaquin Valley, all public school superintendent's offices and the primary health care facilities now have NWR receivers.

*Dan Gudgel, WCM, WFO San Joaquin Valley, CA  
daniel.gudgel@noaa.gov*

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## Mark Trail Award Recognizes Donations to Schools, Hospitals

Stan Wilson, General Manager/CEO, of Clarke-Washington Electric Membership Corporation (CWEMC) was presented with the Mark Trail NWR public service award. Now in its 6th year, the Mark Trail Award is given annually to individuals, government agencies and corporations that have supported NWR through financial gifts



*From left Stan Wilson, General Manager/CEO, Clarke-Washington EMC; VADM Conrad C. Lautenbacher, Jr. (retired), Under Secretary of Commerce for Oceans and Atmosphere; Jack H. Elrod, Jr., writer and illustrator of the cartoon Mark Trail; and Brig. Gen. John J. Kelly, Jr. (retired), Assistant Administrator for Weather Services.*

or other program support. CWEMC and NWS dedicated a new NWR transmitter atop the Cooperative's tower in southwest Alabama.

When the transmitter was installed, CWEMC purchased NWR receivers for all schools within range of the new transmitter. The gift program was then expanded to include hospitals, nursing homes, day care centers, county offices and courthouses.

"The combination of the NWS modernization program, which has improved our severe weather detection and forecasting capabilities, and expansion of our weather radio network is a proven formula for saving lives," said NWS Southern Region Director Bill Proenza.

*Gary A. Beeler, WCM, WFO Huntsville, AL  
gary.beeler@noaa.gov*

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## USDA Grant Program Boosts NWR

A USDA RUS Grant Program has expanded NWR across rural areas of eastern Montana. Severe storms pound the region in summer and winter storms can cause loss of property and significant impacts on the economy. Two rural telephone Cooperatives teamed with WFO Billings and Glasgow to expand the NWR program.

Nemont Telephone Cooperative called last summer eager to take part in the program. The Cooperative received grant money to place a new transmitter north of the tribal headquarters on the Fort Peck Indian Reservation.

Mid-Rivers Telephone Cooperative also joined with the two eastern Montana NWS offices to bring two NWR



transmitters to the Glasgow CWA and another two transmitters to the Billings CWA. Its tremendous support of NWR allowed the Cooperative to be one of the recipients of the 2002 Mark Trail Awards. Two of the Cooperative staff members travelled to Washington, DC, to receive the award in April. One radio has been installed, with the final three being installed by late summer.

*Tanja Fransen, WCM, WFO Glasgow, MT  
tanja.fransen@noaa.gov*

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## New York Address Local Disasters With NWR Transmitters

At a ceremony on August 1, NWS Eastern Region Director Dean Gulezian and Dr. DeWitt Baker, Chairman of the Steuben County, NY, Legislature, signed a Cooperative agreement which officially began the broadcasts of two new NWR transmitters in Steuben County. Steuben County has endured nine Presidential Disaster Declarations in the past dozen years, all from severe weather and flooding.

Dean also spoke about the devastating floods in Steuben County from the remnants of Hurricane Agnes in 1972. The ceremony was attended by both TV stations that serve Steuben County, as well as local newspapers and radio stations.

At the conclusion of the ceremony, NWS Binghamton demonstrated the tone alert capability by activating all weather radios on the table with a test message. After the ceremony, there was a special NWS user's meeting with Dean Gulezian, which gave the attendees an opportunity to discuss NWS products and services. The meeting provided valuable input to Dean and WFO Binghamton on what the NWS is doing well and how we can better meet their needs in the future.

*Dave Nicosia, WCM, WFO Binghamton, NY  
david.nicosia@noaa.gov*

## Outreach/Education

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### WFO Las Vegas Helps Indian Tribes Establish Weather Monitoring

In mid June, the first-ever *Fundamentals of Meteorological Stations and Monitoring* workshop was held at the Environmental Protection Agencies Tribal Air Monitoring and Support Center in Las Vegas, NV. COOP Program Manager Ernie Cobb and I instructed meteorology and instrument siting to representatives of 11 Indian tribes from across the Nation. The 3-day workshop gave the tribes a head start on establishing air pollution and meteorological monitoring programs on their own lands.

Represented at this workshop was the Yurok Nation, the first to use EPA resources. The Yurok worked with Eureka, CA, WCM John Lovegrove, to establish a meteorological (met) station. The Yurok site will use a GOES satellite platform to make met data available via RAWs channels. Among other tribes attending were the Nez Perce, Inyo, and Seminole. Similar workshops will be offered to the more than 500 Indian Nations, at the TAMS center in Las Vegas, over the next several years. WFO Las Vegas will continue to support additional workshops. Every WFO with tribal lands may be contacted, at some point, to help the tribes establish meteorological stations.

*Ron McQueen, WCM, WFO Las Vegas, NV  
rmcqueen@noaa.gov*

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### NWS to Present Plans for Digital Forecasting at AMS Annual Meeting

NWS will present plans for digital forecasting at the 83<sup>rd</sup> Annual Meeting of the American Meteorological Society in Long Beach, CA, February 9, 2003.

NWS is implementing new workstation technology and software that can generate high resolution gridded forecasts. The new technology allows interactive preparation of digital forecasts and operations concepts. The AMS sessions will demonstrate software and provide details on product format and methods for access.

The course will also offer information on plans for a National Digital Forecast Database (NDFD). The database

will be comprised of mosaics of local gridded products generated at forecast offices and the national and oceanic scale gridded products issued from the National Centers. Staff will present details on specific grids included in NDFD and the vision for new digital products for the Marine and Coastal, Fire and Public Weather, Hydrologic and Aviation Services. Staff will address the role of the public and private sectors for digital forecasting, and the potential value of NWS digital products to partners and customers.

In addition to the class, NWS Assistant Administrator for Weather Services John J. Kelly, Jr. will host a lunch on "The NWS Vision for Digital Forecasting." This course is designed for representatives of private meteorological services, emergency managers, military services, university and research groups, print and broadcast media, and federal, state, and local agencies.

To register or for more information, go to the AMS Web site <http://www.ametsoc.org/AMS> or contact Jamie Vavra at (301) 713-1677 x 111 or [Jamie.Vavra@noaa.gov](mailto:Jamie.Vavra@noaa.gov).

*Jamie Vavra, Meteorologist  
jamie.vavra@noaa.gov*

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## Green Bay Outreach Seminar Draws Media

WFO Green Bay, WI, held its annual Spring Media Seminar on May 2. Eleven meteorologists and weather broadcasters, representing five TV stations and one university, attended the 3-hour seminar organized by SOO Gene Brusky and I.

After MIC Gary Austin welcomed the guests, I presented a review of the 2001 severe weather season and an update on NOAA Weather Radio expansion in Wisconsin. Gene then talked about the meteorology behind a derecho that hit east-central Wisconsin on June 11, 2001. Gene followed with a review of four tornado (and tornado warning) events affecting the area last year, giving those in attendance a chance to make the warning decision.

Next, we reviewed the Interactive Forecast Preparation System, including a demonstration of the Graphical Forecast Editor. The meeting ended with a lively open discussion.

All in attendance agreed that the annual seminar was a big success and looked forward to the next one. Tom Mahoney, chief meteorologist at the local CBS affiliate,



*MIC Gary Austin welcomes the guests to WFO Green Bay.  
Photo by Jeff Last.*

wrote in a follow-up note, "I am greatly impressed by the outreach the NWS Green Bay office has extended the media over the last five or so years. It is the best I've ever been associated with. It is very much appreciated."

*Jeff Last, WCM, WFO Green Bay, WI  
jeff.last@noaa.gov*

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## Visiting WCM Program Benefits

Peter Felsch, WCM, WFO Missoula, MT, recently spent a week at WFO Glasgow, MT. Although in the same state, the two WFOs have vastly different program responsibilities. Missoula is in the heart of the Rocky Mountains; Glasgow is firmly in the northern Plains. Peter and I were able to compare how we run programs and swap ideas for logging verification, logs to prepare for severe weather and a script in AWIPS to track all warnings issued.

Peter's goal was to work some of the high plains severe weather events that peak in mid-July and to be more familiar with some of the challenges of working at an office with significant severe weather. On his first evening shift, he issued several warnings during a squall line event and went through the verification process afterwards. Both WCM's found the experience a good way to gather information.

*Tanja Fransen, WCM, WFO Glasgow, MT  
tanja.fransen@noaa.gov*

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## What the Public Wants to Know

This past spring, Forecasters Laura Finlon and Chip Kasper attended the 7th Annual Earth Day Celebration at Bahia Honda State Park, FL. Laura and Chip ran a portable NWR at the event. They also displayed two large framed cloud charts, a big hit with children and adults.

They played the office videos from Hurricanes Georges and Irene as well as the recent "Waterspouts of the Florida Keys" video. Also on display were a radiosonde, parachute and balloon. Most comments at the booth were positive. Negative comments dealt mainly with the CRS voices. Here is a sample of comments/questions:

- That [CRS] voice is horrible!
- Do you have a cloud chart I can have?
- How can I download weather data from your web site sing a side band radio and a demodulator?
- Where can I buy a NOAA Weather Radio?
- Why is the sky blue?
- What are this year's hurricane predictions?
- How many storms are going to hit the United States?

*Peter Molin, WCM, WFO Key West, FL  
pete.mohlin@noaa.gov*

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## Weather Safety Brochures Welcome Travelers to Upstate New York

NWS Binghamton has a Weather Safety Display at the New York State Welcome Center on Interstate 81 at the New York-Pennsylvania border. The display features brochures on weather safety and NOAA weather radio. Over 2000 brochures on winter, severe weather, tornado and flood safety and NOAA Weather Radio were given out in the past year. This display can be found at the main welcome center help desk and remains a very popular item among travelers.

*Dave Nicosia, WCM, NWS Binghamton, NY  
david.nicosia@noaa.gov*

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## Local Citizen Guides Youth Leaders at Presidential Classroom

From June 29 - July 6, I took part in the Presidential Classroom Scholars Program in Washington D.C. Selected from a competitive pool of applicants, I helped 23 other

volunteers prepare high school juniors and seniors for responsible citizenship. Discussion centered federal government, Washington culture and democracy. Volunteer instructors facilitated small group discussions on current issues including juvenile justice, human rights and the role of the media in the political process.

Highlights for the week included July 4th celebrations on the National Mall and seminars led by Charlie Cook, editor and publisher of *The Cook Political Report*; William Hansen, deputy secretary of education; and Lieutenant General James B. Peake, surgeon general of the U.S. Army and commander of the U.S. Army Medical Command.

Other activities included a private tour of the White House, visits to foreign embassies, two days on Capital Hill, tour of the House of Representatives floor and a performance by the political satire troupe, the Capitol Steps.

I discussed NWS with the students and handed out brochures on NWR and winter storms.

For more information, contact Presidential Classroom at 119 Oronco Street, Alexandria, VA 22314, 1-800-441-6533 or visit Presidential Classroom's Web Site at <http://www.presidentialclassroom.org>.

*Mark Strobin, National Training Program Leader  
mark.strobin@noaa.gov*

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## WFO Great Falls Hosts a Job Shadow

In June, WFO Great Falls, MT, hosted job shadow Margaret Houge, a 4th grade school teacher in Great Falls. Houge won a grant awarded by the Great Falls School District. Houge says she chose NWS because "I wanted to



*Lewis and Clark, MT, Elementary School Teacher Margaret Houge observes USGS employees taking discharge measurements along a flooding Marias River near Shelby, Montana. Photo courtesy of Great Falls Tribune.*

learn more about weather so I could feel more comfortable teaching that portion of our curriculum."

It was a busy week at the WFO. A late snow and rain storm brought the drought-stricken rivers above their banks. IMET Bernie Meier and I took Houge on a tour of streams and rivers in several counties, documenting stages to update hydrologic records. Houge accompanied me to a school talk and a FEMA-sponsored table top exercise. She also accompanied Senior Service Hydrologist, Gina Loss, to a monthly drought task force meeting hosted by Montana's Lieutenant Governor. Houge was also able to spend time with the forecast staff learning how they gather data and implement it into the forecast process.

"I am planning to set up a weather station at school to set the kids off on an adventure," said Houge.

*Rick Dittman, WCM, WFO Great Falls, MT  
rick.dittmann@noaa.gov*

## Inland Flooding Featured at 30<sup>th</sup> Anniversary of Hurricane Agnes

Thirty years ago last June, upstate New York and northeast Pennsylvania were devastated when Hurricane Agnes took an unusual inland track. Agnes dumped 12 to 18 inches of rain in the area causing widespread recording breaking flooding and billions of dollars in damage. Sadly, 122 people were killed by the devastating floods. To raise awareness of the dangers of inland flooding, WCM Dave Nicosia organized a Flood Awareness Campaign featuring the Agnes flood. The campaign, which began last year, was completed this June, and featured a presentation which had video clips and hundreds of photographs from the Agnes flood.

The presentation was given 11 times to hundreds of people. Every single severely impacted community in the NWS Binghamton County Warning Area hosted this presentation. Furthermore, the presentation was tailored to each area it was given to.

The presentation showed how NWS can better forecast inland flooding. The program was featured on a series featuring the Agnes flood. Dave discussed the meteorology and hydrology of the flood, as well as the new capabilities NWS has in flood forecasting and warnings. In addition to this TV series, numerous newspaper interviews were given by NWS Binghamton about the Agnes flood and flood safety in general.

*Joanne LaBounty, Forecaster, WFO Binghamton, NY  
joanne.labounty@noaa.gov*

## Severe Weather

### Montana Golf Tour Amazes Public with Lightning Safety

Forecaster Jeff Zeltwanger and I hit the road during this year's Lightning Safety Awareness Week and logged more than 500 miles visiting 16 golf courses across the wide expanses of south-central and southeastern Montana. Jeff and I personally delivered the NOAA "Lightning Kills: Play it Safe" poster featuring pro golfer Vijay Singh to the Pro Shops at the courses. In addition to deliv-



*Former WCM Steve Kuhl (right) and Jeff Zeltwanger display the "Lightning Kills: Play it Safe" poster that they hand delivered to golf courses across south-central and southeastern Montana.*

ering the posters, Jeff and I gave demonstrations of the NWS Billings Web site and showed how it was an excellent resource for receiving the latest forecasts, radar and satellite data. The Golf Pro's were extremely grateful to have received the posters and were "amazed" that someone from the NWS paid them a personal visit.

*Steve Kuhl, Former WCM, WFO Billings, MT  
stephan.kuhl@noaa.gov*

## Lightning Safety Awareness Week 2002 at WFO Reno

Lightning is one of the biggest threats to public safety in Nevada, especially in the summer. During Lightning Safety Week, daily public service announcements were broadcast on NWR, sent from AWIPS and faxed to area media Sunday through Saturday. These efforts resulted in a live radio interview with the main news-talk radio station in Reno during the morning drive time show, an interview with the local NBC-TV affiliate and a newspaper interview. In addition, the chief meteorologist with the Reno CBS-TV affiliate devoted his daily column in the main Reno area newspaper to lightning safety each day.

On Friday, May 3, the Storm Prediction Center issued a test Severe Thunderstorm Watch for Nevada. This was followed by a test Redefining Statement (SLS) product from Reno containing a few lightning safety tips. These tips were repeated in an Emergency Alert System (EAS) Re-



*During the 4 hours the test watch was in effect, a SKYWARN spotter exercise was held, testing a new voice and packet amateur radio station at WFO Reno.*

quired Monthly Test message broadcast on NWR from WFO Reno. More than 60 test messages of severe weather from other SKYWARN spotters were received back at WFO Reno during this exercise.

This year's Lightning Safety Awareness Week was a big success at WFO Reno. We plan to build on our activities for another fun celebration in 2003.

*Roger Lamoni, WCM, WFO Reno, NV  
roger.lamoni@noaa.gov*

## Summer Weather Draws Crowd

This past spring, WFO Bismarck, ND, organized a special public safety forum in Minot and Bismarck, ND. The forum consisted of a panel of warning experts including Emergency Managers, the NWS, Police Chiefs and local TV meteorologists. Approximately 300 people were expected to attend this session on severe summer weather.

*Daniel Noah, WCM, WFO Bismarck, ND  
daniel.noah@noaa.gov*

## StormReady

### StormReady Tops 400; Gains Oregon, Maryland, Massachusetts

The StormReady program, an NWS effort to help communities and counties ensure they are ready for a weather emergency, welcomed its 400th community in July. At press time the total was 420.

Three more states, Oregon, Maryland and Massachusetts, have all registered their first StormReady site in the last 60 days as well, bringing the total number of states with at least one StormReady community to 42.

The program, now in its third year, aimed to hit 400 by the end of the fiscal year in October. StormReady is also nearing its goal of having all 50 states take part in the program.

Idaho holds top honors in the StormReady annals for recognizing 104 communities. North Carolina, Florida, Georgia, Illinois and Missouri have the next most impressive numbers.

Oklahoma, North Dakota and Minnesota welcomed some of the first communities and are already renewing the program's 3-year recognition status for sites in their states.

In July, StormReady welcomed a new manager, Steve Kuhl, formerly a WCM in Montana. Steve replaces John Ogren, who returned to his native Midwest as a Meteorologist in Charge.

For more information on StormReady, go to <http://205.156.54.206/stormready>.

*Melody Magnus, StormReady Editor/Webmaster  
melody.magnus@noaa.gov*

## Terrorism & Weather

### Terrorism and Weather: New Booklet

WFO Birmingham, AL, helped prepare and publish a booklet on terrorism and severe weather awareness. The booklet was put together by Alabama Concerned Citizens for Emergency Survival Services committee (ACCESS), a group formed after the blizzard of 1993. ACCESS has focused on assembling plain language material with survival information. A large part of the original booklet was on weather. After September 11, the booklet was revised to include a focus on terrorism as well. We believe this is the first weather booklet of its kind that tries to improve public awareness on terrorism.

The project is funded by private and corporate donations through the Edie Hand Foundation, a nonprofit organization. So far ACCESS has distributed 75,000 copies through supermarkets but we're shooting for one million!

*Brian Peters, WCM, WFO Birmingham, AL  
brian.peters@noaa.gov*

### IAEM Conference To Feature *Defending the Homeland*

NWS will once again play a critical role in the International Association of Emergency Managers (IAEM) conference to be held October 12-16, in Columbus, OH. This Year's Theme, *Defending the Homeland: Comprehensive Emergency Management*, will include opening remarks from representatives of FEMA and the Office of Homeland Security. The conference will also take a brief look at

the history of emergency management. Sessions will include:

- Public Health: Learning from the Past—Preparing for the Future
- FBI Coordination with Local Officials During and After a Disaster
- Preparedness Through Knowledge: The Disaster Management eGov Initiative.

NWS sessions are as follows:

- NWS Supports Emergency Managers, Weather or Not
- NWS Advanced Flood Forecasting
- Climate-Weather Link and U.S. Hazards Prediction

*Ron McQueen, WCM, WFO Las Vegas, NV  
ron.mcqueen@noaa.gov*

## Winter Weather

### Workshop Targets Convective and Winter Storms

WFO Bismarck, ND, hosted the Sixth Annual Northern Plains Weather Workshop in May. Taking part were meteorologists from North and South Dakota, Minnesota, Montana and Canada. The workshop's focus was on northern plains convective and winter storms. NWS staff discussed the Interactive Forecast Processing Service and severe weather associated with bow echoes.

*Daniel Noah, WCM, WFO Bismarck, ND  
daniel.noah@noaa.gov*

### Climate, Water and Weather Links

WCM/SOO List	<a href="http://www.nws.noaa.gov/om/wcm-soo.pdf">http://www.nws.noaa.gov/om/wcm-soo.pdf</a>
NWS Publications List	<a href="http://www.nws.noaa.gov/om/pubslst.pdf">http://www.nws.noaa.gov/om/pubslst.pdf</a>
NOAA Weather Radio Information	<a href="http://205.156.54.206/nwr/">http://205.156.54.206/nwr/</a>
Aviation Weather	<a href="http://aviationweather.noaa.gov/">http://aviationweather.noaa.gov/</a>
Flooding/Water	<a href="http://www.nws.noaa.gov/om/water/index.shtml">http://www.nws.noaa.gov/om/water/index.shtml</a>
Heat Safety and Awareness	<a href="http://www.nws.noaa.gov/om/heat/index.shtml">http://www.nws.noaa.gov/om/heat/index.shtml</a>
Hurricane Safety and Awareness	<a href="http://www.nws.noaa.gov/om/hurricane/index.shtml">http://www.nws.noaa.gov/om/hurricane/index.shtml</a>
Marine Weather	<a href="http://www.nws.noaa.gov/om/marine/home.htm">http://www.nws.noaa.gov/om/marine/home.htm</a>
Past Weather/Climate	<a href="http://lwf.ncdc.noaa.gov/oa/ncdc.html">http://lwf.ncdc.noaa.gov/oa/ncdc.html</a>
Severe Weather Safety and Awareness	<a href="http://www.nws.noaa.gov/om/severeweather/index.shtml">http://www.nws.noaa.gov/om/severeweather/index.shtml</a>
Winter Safety and Awareness	<a href="http://www.nws.noaa.gov/om/winter/index.shtml">http://www.nws.noaa.gov/om/winter/index.shtml</a>
Current Weather, NWS Home Page	<a href="http://weather.gov">http://weather.gov</a>