Aware

Summer 2004

Climate, Water, Weather

New NWR Warning Event Codes To Be Implemented on June 30

By Herb White, NWS Dissemination Services Manager
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On June 30, NOAA Weather Radio (NWR) will begin national implementation of the new Specific Area Message Encoding/Emergency Alert System (SAME/EAS) event warning codes for a variety of non-weather events. Non-weather related EAS messages are prepared by local or state civil authorities and may be relayed over NWR and EAS. The NWS does not initiate non-weather related EAS messages.

NWR users will be able to program their receivers to relay only chosen alert messages such as fire warnings, AMBER alerts, local area emergencies, radiological or nuclear power plant warnings, and earthquake, landslide or volcano warnings. Users who do not want to receive certain types of alerts can program their receivers accordingly.

The Federal Communications Commission, which makes the rules concerning EAS, dictated the event code changes. The NWS delayed implementation of the new SAME/EAS event codes and marine location codes to allow EAS equipment manufacturers time to upgrade their products to accommodate the new codes and to allow broadcasters time to upgrade their EAS equipment.

NWS is upgrading existing warning-generation software and weather radio formatters to handle the new codes. The NWS Office of Climate, Water, and Weather Services issued Service Change Notice 04-10 regarding the topic on March 5, 2004.

NWR receiver owners should check their receiver's documentation or contact the manufacturer to see if the new event codes are already programmed into the receiver or if they can be manually added. Customers with the most current generation of weather radios featuring the capability to program the new codes should program their new SAME/EAS event codes before June 30. If the new event codes cannot be added to existing NWR receivers, the receiver may generate an unknown event alarm. Owners of non-upgradable radios wishing to receive the new codes would have to purchase a newer model radio receiver.

The next improvement of non-weather emergency message relay on NWS dissemination systems will come in September 2004. The NWS will issue another Service Change Notice early this summer to announce use of new product codes in September on non-weather emergency *text* messages to parallel the NWR SAME/EAS messages. Working together, emergency managers, broadcasters, and the NWS can ensure a smooth implementation of these new event codes. And, with the use of these new codes, the public can be better alerted and prepared for non-weather emergencies.

A list of the current and new SAME/EAS codes to be implemented on June 30 is available at **www.nws.noaa.gov/os/eas_codes.htm.** Recommended definitions and content of non-weather event messages is available in NWS Instruction 10-518 Appendix C, available at **www.nws.noaa.gov/os/dissemination/NWSI_10-518AppC.pdf.** See also **www.fcc.gov/eb/eas/.** ❄

Inside Aware

Hurricanes

Hurricane Preparedness Week: Hunters Take Flight

By Stacy Stewart, HS/WCM, TPC/NHC, Miami, FL
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The NOAA Tropical Prediction Center/National Hurricane Center (TPC/NHC) is actively engaged in two major hurricane preparedness and outreach programs for the public and emergency managers: Hurricane Preparedness Week and the Hurricane Hunter program.

President George Bush declared May 16-22, 2004, National Hurricane Preparedness Week, the fourth year for this national awareness event. This year the name of the week changes from Hurricane Awareness Week.

The far-reaching effects caused by the landfall of Hurricane Isabel last year along the East Coast have brought increased attention to the need for hurricane preparedness.

For a wealth of information about hurricanes and how to prepare for them, go to **www.nhc.noaa.gov/HAW2/english/intro.shtml,** for an English version and **www.nhc.noaa.gov/HAW2/espanol/intro_ espanol.shtml** for a Spanish explanation.

Aware

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Aware in PDF**—weather.gov/om/aware.PDF**
AwareNow—**weather.gov/om/awarenow.shtml**

Hurricane Hunters

Each year, the TPC/NHC staff, in conjunction with flight crews from NOAA or U.S. Air Force Reserve Hurricane Hunters, visit the Caribbean and Central America on a Hurricane Awareness Tour (HAT) to promote hurricane preparedness and awareness. This year, TPC/NHC Director Max Mayfield and a host of other dignitaries made stopovers in Mexico, Dominica, Martinique, Guadeloupe and Puerto Rico. In Puerto Rico alone, nearly 10,000 people toured the Air Force WC-130 Hurricane Hunter aircraft.

NWS conducted a Hurricane Awareness Tour May 16-21 for the Gulf of Mexico coastal area. Stopovers included Houston, TX; Baton Rouge, LA; Panama City, FL; Key West, FL; and Port Charlotte, FL.

For additional information about the HAT, go to **www.nhc.noaa.gov/NOAA_pr_03-04-04.shtml**. ❄

Hydrology/Flooding

Flood Safety Campaign Launched "Turn Around Don't Drown"

Larry Wenzel, OCWWS, Hydrologic Services Division
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Each year, more deaths occur due to flooding than from any other severe weather related hazard. Why? The main reason is people underestimating the force and power of water. Many of the deaths occur in vehicles as they are swept downstream. Most of these drownings are preventable, but too many people continue to drive through flowing water or around the barriers warning that the road is flooded.

All it takes to lose control of your vehicle is 6 inches of flowing water, and in 2 feet of water most vehicles will float.

Turn Around Don't Drown (TADD) is a safety campaign developed by the NWS Southern Region to reduce the number of deaths and loss of property. Because of their efforts, it has become a national campaign throughout the NWS. Many agencies, including the American Red Cross, the Federal Emergency Management Agency (FEMA), the Federal Alliance for Safe Homes

(FLASH), and numerous state and local governments have partnered with the NWS on TADD.

NWS has created a toolbox at **http://tadd.weather.gov** to provide NWS field offices and others with the resources they need to promote Turn Around Don't Drown. The toolbox includes:

- Introduction to TADD
- Headlines and News from Across the Country
- TADD Success Stories
- Audio Visuals, Brochures, Resources, Articles and Publications.

Contributions to enhance the TADD toolbox are always welcome and should be sent to **Larry.Wenzel @noaa.gov**. ❄

Marine Services

NWS Takes Part in "Break the Grip of the Rip" Campaign

By Timothy Schott, Marine Services
Edited by Donna Ayres, Aware Editor
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Rip currents are a major cause of drowning deaths at surf beaches. More than 100 people a year are reported to have drowned when they were unable to escape from a rip current. An unknown number of rip current related deaths go unreported.

To prevent future deaths, NWS, in partnership with NOAA's Sea Grant Program, the National Ocean Service and the U.S. Lifesaving Association, launched a campaign to educate the public on how to make their beach experience safer. This summer, a new brochure, "Break the Grip of the Rip," is being distributed at beaches where frequent rip currents occur. The team is providing public service announcements on rip current safety and artwork for outdoor metal signs to be posted along boardwalks and beach fronts.

A national media event was held on May 24 at Wrightsville Beach, NC, to highlight rip current safety. NOAA Administrator Vice Admiral Conrad Lautenbacher headlined the event, which marked the start of the 2004 National Beach Safety Week.

NWS standardized a new Surf Zone Forecast product and rip current information for the 2003 season. The 2004 "Break the Grip of the Rip" campaign continues our efforts to prevent deaths from these killer currents.

For further information, visit **www.ripcurrents.noaa.gov** or contact Tim Schott at 301-713-1677 x122.❄

NWS Releases New and Revised Marine Service Charts

By Richard May, Meteorologist, Marine and Coastal Branch
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Marine and Coastal Weather Services published the following Marine Service Charts (MSC) since summer 2003.

- **MSC #9, Central and Northern California Waters:** Now includes three of the largest NOAA marine sanctuaries: Cordell Bank, Gulf of Farallones and Monterey Bay. For more information on the marine sanctuaries go to **www.sanctuaries.nos.noaa. gov**
- **MSC #16, Guam and Northern Mariana Island Waters:** In print as of September 2003.
- **MSC #2, Long Island Waters and New York Harbo**r: Now contains a section for new buoy data available via email
- **MSC #13, Hawaiian Islands:** Now contains the boundaries of the Hawaiian Island Humpback Whale Marine Sanctuary
- **MSC #14, Puerto Rico and the U.S. Virgin Islands**: Under development; will include more geographic names and locations than older versions

Marine Service Charts provide detailed information to mariners on how to get marine weather information. Each chart covers a different segment of the U.S. coastline or territorial waters.

NWS marine focal points may order these charts from the National Logistics Supply Center. For the public, MSC charts are distributed at major marine expositions and can be ordered online at **www.nws.noaa.gov/om/marine/pub.htm**. ❄

Marine PDS Program To Expand To Six Modules

By Richard May, Meteorologist, Marine and Coastal Branch
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OCWWS is working with COMET to develop six marine PDS modules. The first module in the marine PDS, Wave Types and Characteristics, was released in August 2003. This module is now posted on the COMET web site at **http://meted.ucar.edu/topics_marine.php**. The next planned modules, all under varying stages of development, are:

- **Wave Life Cycle I: Generation**—Subject Matter Experts: John Lovegrove and Troy Nicolini.
- **Wave Life Cycle II: Propagation and Dissipation**—Subject Matter Expert: Scott Stripling.
- **Shallow Water Wave Process:** Subject Matter Experts— John Lovegrove and Troy Nicolini.
- **Marine Winds:** Subject Matter Experts: Brad Colman, Wendell Nuss, and Pat Welsh.
- **Rip Currents:** Subject Matter Expert: Timothy Schott and Rip Current Awareness Team. ❄

NOAA Weather Radio/ Dissemination

NWS Plans HazCollect System for Non-Weather Emergency Messages

Herb White, NWS Dissemination Program Manager
By Herbert.White@noaa.gov

NWS will implement a new, centralized point of collection for non-weather related emergency messages broadcast over NWS systems. NWS received specific funding to develop the All Hazards Emergency Message Collection System in its Fiscal Year 2004 budget when President Bush signed the FY04 Omnibus Appropriations Bill into law January 23, 2004.

NWS expects to deploy the All-Hazards Emergency Message Collection System, HazCollect, in the summer and fall of 2005. HazCollect will provide an information technology interface between state and local systems, such as EMnet, and the NWS Advanced Weather Interactive Processing System (AWIPS). HazCollect will work through FEMA's Disaster Management Interoperability Services.

Emergency managers need a fast, reliable way to inject messages into the Emergency Alert System (EAS); however, no single technical solution has been federally mandated or locally selected to do this. Each state is free to choose any system it prefers.

From a system management and security perspective, it not advisable for NWS to attach multiple interfaces to the AWIPS and Local Area Networks of each of the 122 Weather Forecast Offices. So many interfaces open up a large number of external portals for viruses and hackers and increase the overhead for software upgrades and hardware maintenance. A more practical approach is to establish one secure, centralized interface with backups where all the various systems have fewer, more manageable connections to the NWS systems.

NWS also is searching for interim solutions to address potential double-trip EAS messages broadcast over NWR and through systems such as EMnet. The NWS will continue as a full partner in EAS, with NOAA Weather Radio remaining the NWS' primary input to EAS, and where chosen by state and local authorities, the primary input to EAS for emergency messages of all types of hazardous events.

NWS is carefully planning a comprehensive solution to import emergency managers' critical non-weather emergency messages into the NWS dissemination infrastructure. NWS intends this new system to ensure efficient distribution to other national systems and to EAS for rebroadcast. ❄

NWS Responds to Customers With Valid Time Event Coding

By Herb White, NWS Dissemination Services Manager
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In response to customer requests, NWS has developed Valid Time Event Coding (VTEC), a new code string to be used in many NWS event-driven text products and in routine marine forecasts.

VTEC will explicitly describe the parameters of Watch, Warning and Advisory (WWA) events. VTEC also will aid in the automated delivery of WWA information to and by our customers and partners. This new code form was requested by NWS partners and customers with whom NWS coordinated development, testing and implementation.

There will be two types of VTEC strings: Primary-VTEC (P-VTEC), which will be used every time VTEC coding is required, and Hydrologic-VTEC (H-VTEC), to be used in conjunction with P-VTEC during Flood and Flash Flood WWA events.

The P-VTEC string contains information on the WWA product being issued, including the time that WWA conditions are expected to begin and end, and an Event Tracking Number which identifies a particular event during its lifetime.

VTEC will be produced automatically by the AWIPS baseline product formatters. NWS staff will not directly handle VTEC coding. The values appearing in the VTEC strings will be taken from the event parameters entered by forecasters into the baseline formatter templates as they prepare WWA products.

The new NWS Instruction 10-1703, which took effect in June, describes the rules and uses of VTEC. The directive contains numerous examples of VTEC coding to better familiarize NWS staff and partners and customers. These include full event sequences of Winter Storm and Flood products, a Special Marine Warning, and Warnings and Advisories in Routine Marine Forecasts.

NWS plans to implement product quality control software in WWA and WarnGen AWIPS baseline product formatters at the same time as VTEC implementation. The

presence of VTEC in NWS products and the quality control checks may lead to changes in current WFO Operational Procedures when issuing, updating, correcting, and/or ending WWA events. NWS is planning training for forecast office staff over the next several months.

NWS conducted an Initial Operation Testing and Evaluation at its headquarters in late April. NWS Headquarters Program leads and then NWS Field Forecasters ran numerous VTEC scenarios through the product formatters. In addition to the new VTEC coding and quality control software, NWS also tested changes to product headlines.

An Operational Testing and Evaluation is planned for late summer/early fall at a number of forecast office nationwide. Operational implementation of most products is planned for February 2005. For more information on VTEC, go to **weather.gov/os/vtec**. ❄

EMWIN Changes Coming With GOES-N Satellite

By Bill Johnson, EMWIN Transition Manager, NWS CIO
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The Emergency Managers Weather Information Network (EMWIN) is an NWS dissemination system that provides timely dissemination of warnings, watches, graphics, and forecasts to customers at minimal cost.

The primary users of EMWIN include emergency managers, radio and television stations, and others who need timely, essential weather information

When the next generation GOES satellite series becomes operational, the EMWIN signal will no longer be broadcast in its current form. Changes in the satellite broadcasts will require changes in commercial satellite receivers currently used.

GOES-N is scheduled for launch in December. It will be stored in-orbit following 6 months of testing and checkout. The EMWIN broadcast will shift to GOES-N sometime between 2005 and 2011.

On April 27, NWS hosted an EMWIN User-Vendor conference to gather input from users and vendors before finalizing the NWS EMWIN transition plan for the GOES-N generation satellite. There were two recurring messages from the attendees of the conference.

- Most EMWIN users have limited funding and whatever hardware/software is required in the next EMWIN era must be inexpensive.
- Users want increased bandwidth to allow for the growth in quantity and size of emergency weather information products.

To keep NWS Forecast Offices in the loop on the EMWIN transition, we have been sending periodic transition status emails to NWS Regional WCMs requesting they forward them onto field WCMs.

Emergency Managers can stay informed of EMWIN transition progress by contacting their local WCM or by visiting the NWS EMWIN website at: **http://iwin.nws.noaa.gov/emwin/index.htm**. ❄

Weather Page Draws TV Attention: NWS and WAXO-AM

By Jerry Orchanian, WCM, Nashville, TN
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ITO Mike Davis and I recently did a live radio interview on WAXO-AM, Lewisburg, TN, and on Cable Access TV channel 12, to promote Severe Weather Awareness Week, tornado drill day and SkyWarn. Mike focused on a weather Web page he helped create for WAXO-AM and its low-power cable TV affiliate. Mike's work impressed General Station Manager Bob Smartt enough to earn the interview invitation.

Mike commented that for outreach purposes, in conjunction with Tennessee Severe Weather Awareness Week, he designed a Web-based application for the WAXO-TV in Lewisburg, TN. This Web-based application displays 88D radar and warning/watch plot map, satellite, Storm Prediction Center Watches Day 1 Convective Outlooks and a regional radar shot continuously looping. It displays the NWS logo and Website along with the closest automated observation. ❄

Standing is WCM Jerry Orchanian and ITO Michael Davis. Seated is General Manager Bob Smartt.

Local NWS "Kid's Weather Hour" Hit the Airwaves in January

By Steve Drillette, WCM, NWS Amarillo, TX
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From January through May 2004, NWS Amarillo, TX, hosted a ***"Kids Weather Hour"*** on NWR. Local children of all ages as well as teachers were encouraged to tune in as NWS Meteorologists read and answered student weather questions via weather radio. The program was limited to listeners in local counties with NWR coverage, those surrounding Amarillo. Participants needed Web access and an NWR receiver or AM radio. An NWS Amarillo Web site offered full instructions for accessing the program as well as information about NWR. The program has been a huge success judging by the number of questions received for the show. ❄

Rural Utilities Service Helps Fund New NWR Transmitter

By Rick Dittmann, WCM, Great Falls, MT
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On a mild day in southwest Montana, NWS Great Falls staff and Western Region Headquarters teamed with other local, state and federal agency representatives to dedicate the new Dillon NWR transmitter. The Rural Utilities Service of the U.S. Department of Agriculture provided $5 million in grants for the purchase of NWR transmitter systems in areas where population met rural specifications. A great deal of the recent NWR expansion across the United States was funded through this program. The transmitter, at 9,500 feet on Maurer Mountain was installed during a vicious late spring snow storm. ❄

Outreach/Education

NWS SkyWarn Program Becomes Required Part of University Program

By Greg Gust, WCM, Grand Forks, ND
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"When have the clouds become threatening? Now you know!" This was my tag line as an instructor to 23 students in Professor Lloyd Mitchell's Online Weather Studies class in severe weather detection and reporting procedures.

Professor Mitchell has made SkyWarn Spotter training with the Grand Forks NWS office a mandatory part of his class curriculum. About 45 of his students are now trained SkyWarn Spotters. About half of these students are also part of the Indians Into Geological Sciences program sponsored by the University of North Dakota (UND) in Grand Forks and led by Professor Mitchell.

Mitchell is primarily an instructor in the UND Geology Department. He recently earned his credentials as an Online Weather Studies Instructor via the American Meteorological Society's Faculty Enhancement Workshop. ❄

Easier Online Response Systems for Customer Questions Moves Forward

By Melody Magnus, Aware Editor
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The Customer Relationship Management (CRM) system is a Web-based interface for answering questions from customers. The system will gradually replace emails to Webmasters or specific staff with a Frequently Asked Questions section and an option for a personal response from a service expert or customer service rep.

The system offers customers the advantage of a single entry point for any weather service question. CRM allows coworkers to easily share workload during busy times or vacations, rather than having questions sit for extended periods in a single mailbox. Service reps can use templates that have standard or personal greetings and closings, reducing errors and saving time. Staff can save common and unusual responses in the database for easy access by anyone qualified to respond to questions. The response from customers so far has been extremely positive:

- **Response helpful**—85 percent: 49 percent strongly agree, 36 percent agree
- **Interface Easy to Use**—81 percent: 45 percent strongly agree, 36 percent agree
- **Response Timely**—98 percent: 67 percent strongly agree, 31 percent agree

The CRM system has undergone several major overhauls to improve the interface and allow expansion to other parts of NWS. Currently, it is being used operationally by the Data Management Branch of the NWS Chief Information Officer and by the NWS Office of Services. To see the system, go to **weather.gov/os/contact.shtml**. ❄

Publications

NWS Evaluates Service for Major Weather Events

by Wayne Presnell, NWS Performance Branch
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The "Record Tornado Outbreaks of May 4-10, 2003" Service Assessment Report was released in March. The report examined NWS services during a tornado outbreak in the central and southern United States that produced an unprecedented number of tornadoes and resulted in 39 fatalities in four states. Six of the tornadoes were classified as F4 on the Fujita Tornado Intensity Scale.

NWS customers and partners were satisfied with the services before and during the outbreak, often expressing their gratitude for the high level of performance provided. The report identified nine recommendations for improvements within the NWS severe weather warning process. The report can be downloaded at: **weather.gov/os/assessments/index.shtml**.

Three other Service Assessment reports are currently being written:

- Hurricane Isabel, September 18-19, 2003
- Southern California Wildfires, Oct 20–Nov 3, 2003
- Baltimore Inner Harbor Taxi Incident, March 2004.

Check the Website above later this year for these reports. ❄

Owlie SkyWarn Gets Wings Updated in Revised Booklet

By Melody Magnus, Aware Editor
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This summer, the NWS Performance and Awareness Branch has released an updated version of Owlie SkyWarn, a longtime favorite NWS product geared toward Kindergarten to 6th grade students. The revised Owlie booklet offers clean, crisp graphics, up-to-date statistics and examples, and a new easier-to-use format.

The new and improved Owlie can be used either as one large booklet covering five major weather hazards or as separate sections, each with quizzes and games for teachers who prefer to focus on one or two hazards areas. The new format will allow a teacher in North Dakota to download the Winter Weather section but skip Hurricanes while a classroom in Kansas can focus on Tornadoes and Lightning to meet curriculum goals. The five sections in Owlie include:

- Hurricanes
- Lightning
- Tornadoes
- Floods and Flash Floods
- Winter Storms

For younger children, the product offers pages that can be colored. Older kids can try the easy games and quizzes. Owlie comes in an 8.5" x 11" format to allow teachers to easily reproduce pages. Limited copies of the booklet will be available at no charge from the National Logistics Supply Center and from local NWS offices. The products can also be downloaded as one product or in separate sections from **www.nws.noaa.gov/om/brochures.shtml**.

If you would like to be notified when the revised Owlie is released, email **Melody.Magnus@noaa.gov** and I will send you an update. ❄

Severe Weather

2004 Lightning Safety Awareness Week Campaign

By Steve Kuhl, National WCM Program Manager
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NWS hosted its fourth annual National Lightning Safety Awareness Week (LSAW) from June 20-26, 2004. This year's campaign is focusing on outdoor recreation. Torii Hunter, recipient of a Rawlings Gold Glove award in 2001 and 2002 and a 2002 Major League Baseball All Star for the Minnesota Twins, will help NWS promote lighting safety by appearing on this year's "Lighting Kills, Play It Safe" poster.

This year the NWS LSAW Team has also teamed up with Little League Baseball to promote lightning safety. A NOAA Press Release describing these efforts was issued on March 17 entitled "Keeping the Game Safe—NOAA Teams with Little League Baseball on Lightning Safety Awareness."

Little League Baseball provided lightning-safety information to sports officials across the country through its safety newsletter, *ASAP (A Safety Awareness Program)*. In its Nov./Dec. 2003 newsletter, Little League Baseball

Major League Baseball Minnesota Twins Star Headlines Lightning Safety

included a copy of a trifold brochure called, "Coach's and Sports Official's Guide to Lightning Safety," which was created by the NWS.

Copies of the Torii Hunter poster, NOAA Press Release and Coach's and Sports Official's Guide to Lightning Safety are available on the NWS Lightning Safety Website at: **www.lightningsafety.noaa.gov**.❄

New Product to Provide More Specific Warnings and Watches

By Rich Okulski, NWS Severe Weather Program Leader
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NWS is moving this year to a new suite of products to inform customers which counties, parishes, independent cities and nearshore marine zones are included in Severe Thunderstorm and Tornado Watches. The process used to provide customers with these products is called Watch By County. NOAA's Storm Prediction Center started issuing the first operational product in this suite called the Watch Outline Update Message on January 6, 2004.

The Watch By County suite of severe weather products provides NWS partners and customers with an orderly process to receive new, modified, and cancelled severe weather (Tornado and Severe Thunderstorm) watch information. Watch By County products are issued through a partnership between local Weather Forecast Offices and the Storm Prediction Center.

NOAA's NWS will conduct an Operational Test and Evaluation of the Watch By County severe weather products from June through August. These products will have real time severe weather information for select locations within the continental United States, however they are to be used for evaluation purposes only. NOAA's NWS plans to implement the full Watch By County suite of severe weather products no later than January 2005. ❄

McDonalds Launches "McReady" in Oklahoma to Promote Severe Weather Awareness

By Richard Smith, WCM, Norman, OK
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Oklahoma Governor Brad Henry proclaimed April 2004 as McReady Oklahoma Family Preparedness Month in Oklahoma. NWS Offices in Tulsa and Norman have joined with several groups and agencies, including:

- American Red Cross
- OG&E Electric Services
- Oklahoma Citizen Corps
- Oklahoma Department of Emergency Management
- Oklahoma Emergency Management Association
- Oklahoma Floodplain Managers Association
- The Salvation Army
- Tulsa Mayor's Citizen Corps/Tulsa Partners, Inc.

To highlight severe weather preparedness, in April all 170 McDonalds restaurants in the state displayed weather safety information, including brochures on family preparedness, tornado, lightning and flash flood safety and NWR.

As part of the campaign, each McDonalds restaurant in the state now has a Weather Radio. In addition, weather safety information will be featured prominently on tray liners and bag stuffers so all customers will be exposed to weather safety messages during the month. Governor Henry announced the beginning of McReady Oklahoma Family Preparedness month in an April 2 news conference at the state capitol in Oklahoma City.

McReady Oklahoma began as a small project last year that has expanded this year to include the entire state. Tulsa WCM George Mathews and I served as members of the planning committee.

You can find more information about the program by visiting **www.mcready.org**. ❄

NWS Meteorologist Andy Kula, left, and Alan Beste in Cedar Rapids, IA, at the Iowa Coaches and Umpires Clinic.

High School Athletic Association Creates Lightning Awareness PSAs

by Andy Kula, Meteorologist, NWS Des Moines, IA
Andy.Kula@noaa.gov

NWS Des Moines has joined with Alan Beste of the Iowa High School Athletic Association (IHSAA) to inform athletes, coaches and umpires about the dangers of lightning. They have produced eight high quality audio Public Service Announcements for Lightning Safety to inform Iowa athletes about the dangers of lightning.

B.J. Schaben of Clear Channel Radio and a local sports radio/TV analyst for Iowa State University, Drake University and Iowa High School sports graciously recorded the announcements. IHSAA is producing and distributing the CDs for 88 Iowa radio stations for use during sports broadcasts. Each high school will also receive them for use during public address system announcements.

The PSAs can be reproduced and distributed for anyone as long as no cost is incurred for the receivers of the PSAs. NWS Des Moines is distributing the PSAs to other local officials, emergency managers and sports organizations including the Iowa Games and the Iowa Cubs, AAA affiliate of the Chicago Cubs.

The announcements, in .wav format, scripts and a PowerPoint CD cover are available on the WCM Resource page. In addition, the local Central Iowa Chapter of the National Weather Association posted the PSAs on its chapter web page. Finally, the PSAs, in MP3 format, are on the National Lightning Safety Website: **www.lightningsafety.noaa.gov/wcm/**.❄

Statistics

Final 2003 Injury, Fatality, Damage Statistics Posted

By Brenton MacAloney, Office of Services
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The Office of Services recently released final 2003 injury, fatality and damage statistics for all major weather categories.

Fatalities dropped from 540 in 2002 to 423 in 2003, while injuries dropped from 3090 to 2913 in the same time frame. By contrast, property damage more than doubled from $4.26 billion in 2002 to $10.26 billion in 2003.

The major killer in 2003 was flooding with 86 deaths, compared to 49 in 2002. Flooding replaced heat as the mostly deadly weather in 2002. The next most deadly weather events were tornadoes, which claimed 54 lives and lightning, which claimed 44. In 2002, tornadoes took the lead with 55 deaths.

Tornadoes remain the greatest danger for injuries with 1,087 in 2003, up from 968 in 2002. Lightning and thunderstorm winds resulted in 237 and 226 injuries respectively and tropical storms/hurricanes accounted for 233 injuries.

Property damage in 2003 was most heavily attributed to wildfire ($2.3 billion), flash flooding ($2.1 billion) and tropical storms and hurricanes ($1.88 billion).

As in 2002, the most significant crop damage in 2003 was caused by drought, which resulted in 572.5 million in losses.

Final statistics were released in late June. For more details, go to: **www.nws.noaa.gov/om/hazstats.shtml**.❄

Storm/TsunamiReady

Tooele Army Depot In Utah Becomes First Military Facility StormReady Site

By Marilu Trainor, NOAA NWS Public Affairs
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On May 11, Ret. Air Force Brigadier General and Director of the National Weather Service David L. Johnson presented the Tooele Army Depot in Utah with a Certificate of Achievement, designating the facility as the first military

On May 11, Tooele Army Depot, Tooele, UT, became the first military site certified as StormReady. From left: Malcolm Walden, Depot Chief of the Management Analysis and Evaluation Office, Depot Commander Lt. Col. Karol Ripley, and NWS Director General Johnson.

StormReady site. Lt. Colonel Karol Ripley, commander of the Depot accepted the award.

During the last few months the depot has been working with the NWS Forecast Office in Salt Lake City to fill the requirements for the StormReady designation. Tooele County in Utah received the designation in July of 2003, inspiring the management and staff at the depot to work for its own StormReady status. With 700 employees and its own security force and emergency management system, the depot is in many respects like a small community where all StormReady criteria could be expected to be met.

The management and staff of the Tooele Army Depot helped meet the criteria by increasing their response capabilities for severe weather at its 24-hour dispatch center and Emergency Operation Center (EOC), An Internet email system was made available in both the dispatch center and EOC, new weather alert radios were installed in these locations and other buildings around the facility, and a new section of the facility's Emergency Operating Plan was developed specifically for hazardous weather. Dave Toronto conducted spotter training for new volunteers and provided weather safety seminars for the management and staff at the facility.

After receiving the Certificate of Achievement, Col. Ripley said, "The StormReady program is a great approach that helped us shore up and develop systems and plans to handle local severe weather in any season, and strengthen our cooperative ties with the National Weather Service. We are excited to be recognized for our readiness capabilities and proud to be associated with the NWS as StormReady partners, and as the first StormReady facility in the Department of Defense." ❄

StormReady County Goes Extra Mile; Wins FEMA Recognition

By Greg Gust, WCM, Grand Forks, ND
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With some of the most severe winter weather in the country, Pembina County, ND, became StormReady in November. The county, which has 11 incorporated communities and a total population of less than 9,000 people, adopted the program in style. The Emergency Manager placed NWRs in all nine of the county's schools, both hospitals, both nursing homes and all county and municipal buildings and swimming pools—a total of more than 30 radios. This past summer, Pembina County was declared a Disaster Resistant County by the Federal Emergency Management Agency (FEMA), making it only the second so designated county in the nation. ❄

Local TV Station Carries StormReady Ceremony

Jerry Orchanian, WCM Nashville, TN
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NWS Nashville MIC Larry Vannozzi, WCM Jerry Orchanian and ITO Michael Davis stole TV time for their StormReady ceremony by conducting it at the beginning of the Fentress County Executive Meeting in Jamestown, TN. The event was televised by the local cable TV station. Fentress County has become the 5th StormReady county in mid Tennessee. ❄

StormReady Gains International Renown via Hong Kong Conference

By Steve Kuhl, National WCM Program Manager
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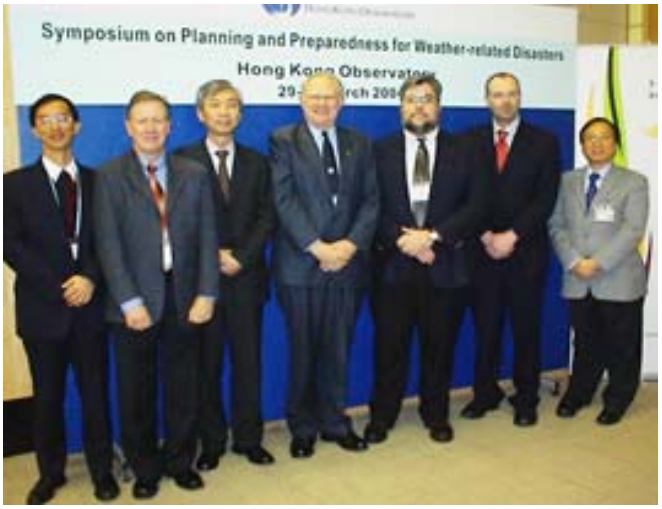
This spring, I represented the United States and NWS at the symposium "Planning and Preparedness for Weather-Related Disasters in Hong Kong ." I was invited to attend the Symposium by C.Y. Lam, Director, Hong Kong Observatory, after Lam heard about the NWS StormReady program and other outreach activities.

My presentation focused on the StormReady program, and the International Decade for Natural Disaster Reduction, the Integrated Warning System, NWS partnerships, the role of WCMs, the National Disaster



Symposium on Planning and Preparedness for Weather-Related Disasters in Hong Kong.

Education Coalition, NWS Lightning Safety Awareness Week, and other NWS outreach initiatives.

Attendees from China and Australia told me they were impressed with the amount of effort that NWS puts into outreach. They also said they were going to show my presentation to their meteorological services colleagues. We all agreed that running a robust weather safety outreach program is necessary to implement a successful warning and preparedness program in our countries.

At the end of the symposium, I also took part in a discussion forum to address questions posed by the approximately 60 attendees. In addition to Hong Kong and the United States, other nations represented included China, Macau, Japan, Ireland and Australia. ❄

Tsunamis

Tsunami Coordination Team Agrees on Key Program Changes

By Jeff Lorens, Western Region WCM Program Manager
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NWS staff members recently took part in a "Tsunami Coordination Meeting", in Honolulu, HI. This meeting, hosted by NWS Pacific Region Headquarters, was a joint effort involving NWS and other federal and state agencies. The key decisions were:

- Western and Alaska Regions will conduct another, more all-encompassing tsunami warning test in September 2004. Their plan is to use the actual tsunami warning codes, as opposed to last year, when only test codes were used. An extensive outreach campaign is planned for the media and public in association with the test. Pacific Region conducts an annual test in April. There is a possibility that Pacific Region may also take part in the September test.
- A team was formed to evaluate the concept of "public friendly products," tsunami warning products designed specifically for the public and media.
- A team was formed to evaluate possible use of multiple warning levels based on expected wave impacts.

The emphasis was on getting all the key people in the tsunami warning program together. In NWS, this meant everyone from field WCMs to national headquarters. It also meant bringing in key people outside NWS: emergency management officials, primarily state-level, and other government organizations with interest in the program such as FEMA, the U.S. Geological Survey and the NOAA Ocean Service.

The meeting focused on improving tsunami warning procedures, as well as associated outreach, education and media issues. It had been nearly 5 years since a meeting of this kind was held. As a result of this year's meeting, some key decisions were made and actions taken, all with the aim of improving the NWS tsunami warning program. ❄

Writer's Corner

Tips for Better Writing

By Donna Ayres, Editor
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Writing: everyone has to do it; everyone agonizes while doing it. Here are some tips to make the task easier.

"That" is a much used but mostly unnecessary word. When you're writing or proofreading (of course, you carefully proofread everything you write!), take a few minutes to see if you can justify each "that." There's a good chance that this four-letter word adds little or nothing to your sentence. In fact, it probably impedes the flow of your words. Read your sentence out loud without the "that." If the meaning is still clear, cut "that" out.

Examples: "The meteorologist predicted **that** we'd have four inches of snow." vs. "The meteorologist predicted we'd have four inches of snow.

"We believe **that** this program will continue to benefit all customers." vs. "We believe this program will continue to benefit all customers."

Of course, there are times when "that" should be used to ensure clarity. But most of the time, get rid of it. Your writing will be clearer and more concise without it. ❄

Footprints: Aware Managing Editor Linda Kremkau Leaves a Legacy

By Don Wernly, Office of Services
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Many years ago, a forecaster in the Fort Worth Weather Forecast Office made the following comment while reflecting upon retirement: "Hopefully, this place is a little different, a little better as a result of my being here. I would like to think I left a footprint." Last summer, Linda Kremkau retired from the Performance and Awareness Division. And through her work, made a difference that will last a lifetime.

Linda Kremkau is enjoying retirement with husband Randy on a beach in Florida. No more cubicle "tan." Now she has a real one.

In the late '80s, Linda was the preparedness program assistant in the Warning and Forecast Branch. She was the one responsible for ensuring all of the Warning Preparedness Meteorologists had the number of preparedness materials necessary to do their job. This included helping the severe weather and flash flood program leader create the videos "Terrible Tuesday" and "The Awesome Power."

Linda also helped develop our preparedness and spotter slide sets. Taking it further, she worked with the newly designated Warning Coordination Meteorologists (WCMs) to develop our preparedness brochures in partnership with the American Red Cross and FEMA.

This led to a full suite of new color materials that have received praise from our partners and other international weather services. In 1994, Linda and those WCMs helping on the brochures were awarded the Bronze Medal for their work. As evidence of success, the Red Cross printed and distributed 22 million of our preparedness brochures in 2003, a feat we would never have been able to accomplish ourselves.

As part of the preparedness program, Linda was one of the founding members of the National Disaster Education Coalition (NDEC). Started in 1994 with the American Red Cross and FEMA, the goal of NDEC is to create and deliver consistent preparedness information to enhance response to warnings and extreme events. NDEC's crowning achievement is: "Talking About Disaster: Guide for Standard Messages." Linda was the NWS focal point for our contribution to the guide.

In later years, as the Warning and Forecast Branch evolved into the Customer Service Core and then the Performance and Awareness Division, Linda was the stalwart staffer serving as the technical editor for the NOAA Disaster Surveys, the new NWS Service Assessments, annual hazard statistics, the Aware Report and all of the division's policy documents and instructions.

She also handled the logistics for fielding service assessment teams as well as each of the National Warning Coordination Meteorologists conferences and the last National Meteorologist in Charge/Hydrologist in Charge conference. Finally, in her spare time, she served as the Division's budget analyst.

Linda Kremkau left a footprint in the National Weather Service when she retired. Not just in headquarters, but with each regional and field office as well as with each of our partner organizations. She made a difference, she made things better, she will be missed. ❄

Linda welcomes emails from old friends. You can write her at randlk@earthlink.net.

Climate, Water and Weather Links

MIC/WCM/SOO/DOH List: **weather.gov/os/wcm-soo.pdf**
NWS Publications List: **weather.gov/os/pubslist.htm**
NOAA Weather Radio Information: **weather.gov/nwr/**
Aviation Weather: **aviationweather.noaa.gov/**
Education/Outreach: **weather.gov/os/edures.htm**
Flooding/Water: **weather.gov/os/water/index.shtml**
Lightning Safety: **www.lightningsafety.noaa.gov/**
Marine Weather: **weather.gov/os/marine/home.htm**
Natural Hazards Statistics: **weather.gov/os/hazstats.shtml**
Past Weather/Climate: **lwf.ncdc.noaa.gov/oa/ncdc.html**
StormReady Home Page: **www.stormready.noaa.gov/**
Severe Weather Safety: **weather.gov/os/severeweather/index.shtml**
Hurricane Safety: **weather.gov/os/hurricane/index.shtml**
Current Weather, NWS Home Page: **weather.gov**