

# Aware

Aware is issued by the National Oceanic and Atmospheric Administration to keep communications lines open within the Agency and with the natural hazards community

Fall 1998/Winter 1998/99

## Science, Technology and Service

### CUSTOMER SERVICE

#### WSOM Chapter J-02 Completely Rewritten

The NWS Office of Meteorology (OM) Customer Service Core has completed WSOM Chapter J-02, Significant Hydrometeorological Events, Post-Storm Data Acquisition, and Service Assessments. This is essentially a new chapter because it completely revises policy on how to conduct service assessments (formerly disaster surveys). It also incorporates policy on significant event reporting, post-storm data acquisition, and determination of tornado F-scale in certain situations.

This chapter does not contain policy that routinely impacts field offices; however, should your office be involved in a weather event that requires a service assessment, chapter J-02 provides useful information on the process. Because people from your office may be asked to serve on a Service Assessment Team, the chapter details roles and responsibilities of team members.

Finally, determination of F-scale has long been a local office responsibility; however, to avoid media and public confusion, and to enable the National Weather Service (NWS) to provide a single F-scale rating, the chapter details a process for determining intensity for tornadoes that result in post-storm data acquisition or a service assessment.

*Bill Lerner, Confirmation of Services and  
Evaluation Program Manager*

#### Seven Service Assessments Completed by OM, Regions

Seven service assessments have been completed since Jack Kelly became NWS Director:

- OM completed the Central Texas Tornadoes (Jarrell), Central Florida Tornadoes, and the Spencer, SD, Tornado.
- Eastern Region finished the Ice Storm and Flood of January 1998.
- Southern Region produced reports on the Hall/White County, GA, Tornado, and the Southeast Tornado Outbreak.
- Pacific Region published Super Typhoon Paka.

OM and the regions are now tracking recommendations contained in the reports. As of October 15, 68 of 120 recommendations had been closed.

These Service Assessments are all available on the Web for you to download. Go to <http://www.nws.noaa.gov/om/omdis.htm>.

*Bill Lerner, Confirmation of Services and  
Evaluation Program Manager*

### Inside Aware

9  
NOAA  
Weather  
Radio  
Initiatives

10  
Hazards  
Community  
Forum

16  
Publications,  
Audiovisuals

20  
Public  
Affairs

Attachments  
A Update on  
WCM Chapters  
B WCM/SOO  
Roster

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## FEMA/NWS Release New Training Program on Warning Coordination

Field offices should have received the latest joint NWS/Federal Emergency Management Agency (FEMA) training effort, "Warning Coordination," in late October. This fourth course, developed by FEMA and NWS, results from a documented need, expressed by emergency managers, for enhanced training on warning coordination and communication.

This class will be taught by Warning Coordination Meteorologists (WCMs) or forecast office and emergency management staff. As with previous courses, the targeted audience is local emergency managers. Students are required to review the warning annex and all procedures for hazardous weather events in their emergency operations plans before starting the class.

*Rainer Dombrowsky, WCM Program Leader*

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## TOPS Team to Develop Baseline Standards for NWS Positions

The Team for Operational Proficiency Standards (TOPS) has been charged by NWS Director Jack Kelly to:

- Identify the core proficiency standards needed for operational positions
- Develop a review and certification process that includes assuring the qualifications of the certifier
- Provide training requirements to support the standards.

Proficiency standards are baseline levels of knowledge, skills and abilities needed to provide quality NWS products and services. The process will benefit the employee, supervisor, organization and customers by ensuring employees can perform at an expected level. The team also will identify needed training to ensure those expectations are reached and maintained.

The standards will probably need to be tailored to local levels. At its initial meeting in September, the team energetically discussed the prototype core proficiency standards for operational GS1340 meteorologist positions to be presented to Jack Kelly by January 1, 1999.

The team consists of four NWS Meteorologists in Charge, three NWS Regional Office staff members, and one person from OM, the Office of Hydrology, National Centers for Environmental Prediction (NCEP), NWS Training Center, and the NWS Employees Organization (NWSEO). The team will be working with NWSEO and asking for ideas and participation from field employees.

*Herb White, Meteorologist*

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## IAEM Conference To Feature NWS Staff and Issues

The International Association of Emergency Managers (IAEM) conducted its 46th Annual Conference, November 7-10, at the Sheraton Waterside Hotel, Norfolk, VA. NWS Director Jack Kelly addressed the conference on that Sunday.

NWS WCMs made presentations to IAEM on the California floods, the New England ice storm and the Central Florida tornado outbreak. These sessions revolved around a presentation by Jim Laver, Climate Prediction Center, who discussed climate forecasting related to El Niño.

*Rainer Dombrowsky, WCM Program Leader*

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## Western Region WCM Workshop Focuses on Internal Operations

Western Region (WR) Headquarters sponsored a 4-day workshop for WCMs from the region's 24 offices last summer in Salt Lake City, UT. WCMs chose workshop topics within a framework suggested by WR Meteorological Services Division (MSD). This format guaranteed that the meeting tackled issues of greatest concern to WCMs. Bruce Bauck (Pocatello), Dan Keeton (Portland), and Ron McQueen (Las Vegas), using input from colleagues, set the agenda.

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## Aware

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Major operational changes have been taking place at a furious rate, especially in the last 12 months. Keeping up with the changes and working to meet customer expectations attests to the skill and dedication of field office staffs. Lively discussions were held on the following topics:

- **Warning Products:** New formats, WISE II software, restriction on combine warnings
- **Outreach:** Lessons learned from the 1997-98 El Niño episode. NEXRAD Weather Service Office (NWSO) Flagstaff production of Flash Flood Video with 13 other agencies in Arizona, development of remote briefing techniques by NEXRAD Weather Service Forecast Office (NWSFO) Seattle using graphics, text, and voice
- **Dissemination:** NOAA Weather Radio (NWR) expansion, Emergency Activation System (EAS) and Console Replacement System (CRS), WR Telephony Interface Project (telephone access to CRS recordings), Emergency Managers Weather Information Network (EMWIN) upgrade, NWR operator proficiency OML, concatenated voice for CRS
- **Quality Control:** Office Quality Control teams, need for thorough post-event verification, involvement of regional office in product checking, product conciseness, follow-up statements
- **Office Drills:** Maintaining staff proficiency, sharing drills on WR MSD Home page
- **Spin-up Operations:** Service transitions, State customer needs vs. local customer needs
- **Fire Weather:** Forecaster training and certification, involvement of WCM in the program. dissemination of Red Flag warnings to emergency managers
- **Marine Weather:** Service transition dates, importance of WCM outreach to marine customer community, the need for local marine spotters (MAREPs), adding more detail to outlook portion of forecast
- **Hydro:** Advanced Weather Interactive Processing System (AWIPS) applications; data bases, service backup; Hydromet and Local Data Acquisition and Dissemination System (LDAD); Quantitative Precipitation Forecasts; need for improved familiarization and interactions between River Forecast Centers (RFCs) and Weather Forecast Offices (WFOs)
- **Coordination:** Routine group conference calls
- **Storm Data:** New *Storm Data* Web site, Significant Weather Related Event Reports
- **Science and Technology:** Thorough update on AWIPS schedule and system capabilities, LDAD System, Internet applications for the office
- **Staffing Issues:** Met Placement Program, shift coverage and alternate work schedules, impact of double Sunday pay restriction scheduling, reduced time for focal point duties (including WCM program), impact of new technologies, such as CRS, on workload
- **Administrative Issues:** Blanket travel orders for WCMs, international travel to Canada and Mexico, semi-annual WCM reports.

The last day of the workshop included a visit to NWSFO Salt Lake City. This NWSFO, collocated with the Colorado Basin RFC, has used AWIPS operationally for over a year and has extensively integrated the CRS synthetic voice into its NWR broadcasts and EAS use. Salt Lake City is also a multiple-Principal User Processor (PUP) office (the *only* office for Utah), has a full fire weather services program, and a hydrologic services program. Touring the NWSFO provided WCMs a glimpse of a future full fledged WFO.

This workshop provided an opportunity for the 24 offices to see how their individual efforts have collectively improved weather and hydrologic services across the entire region. WR Headquarters was able to review with offices the big picture status of the modernization. At the same time, field offices were able to sensitize WR Headquarters staff to the issues they face on the front lines of operational weather forecasting and customer service. WR MSD considers this type of two-way communication invaluable.

*Tom Ainsworth, Western Region WCM Program Manager*

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## Warning Coordination, Customer Service Top Southern WCM Workshop

The Southern Region WCM workshop, held September 16-18, in Fort Worth, TX, was attended by 26 of the region's WCMs. Some WCMs from coastal sites were unable to attend due to the threat from Tropical Storm Hermine. The workshop was divided into five sessions:

- Session 1: Status report of the WCM program, discussion of administrative issues such as *Storm Data* entry and a mission/vision statement for the WCM program
- Session 2: Dissemination of NWS information and other external services
- Session 3: Overview of the new laptop computers and presentation software.
- Session 4: Hazardous weather support, including post-storm data acquisition and wildfire support.
- Session 5: Future products and services, including the IMOST, severe thunderstorm criteria, Internet Home pages, and audio/video projects.

The meeting enabled WCMs to discuss critical issues impacting the warning coordination and customer service programs. It provided the field office representatives with an opportunity to meet and interact with their colleagues and regional support personnel.

*Gary Woodall, Southern Region WCM Program Manager*

## **INTEGRATED HYDROMETEOROLOGICAL SERVICES**

### **Hurricane Liaison Team Supports TPC, FEMA During Hurricane Landfalls**

After a slow start to the 1998 hurricane season, a remarkable nine tropical cyclones formed within 33 days. The Hurricane Liaison Team (HLT) was deployed on several occasions when U.S. coasts were threatened. The HLT supports the Tropical Prediction Center (TPC) efforts to interface with FEMA headquarters and state and local emergency managers, as well as regional and local NWS offices.

OM WCM Program Manager Rainer Dombrowsky and Tropical Program Specialist Dan Petersen were deployed during Hurricane Bonnie, along with NCEP/Hydrometeorological Prediction Center Assistant Director Kevin McCarthy. WCMs Jim Lushine, Miami, FL; and Wayne Presnell, Key West, FL, took part in the HLT during Hurricane Earl.

During the landfalls of Hurricane Georges, WCMs Bruce Burkman, Shreveport, LA; John Jensenius, Gray, ME; and Gene Hafele, Houston, TX, took part along with Hugh Cobb, SOO of Wakefield, VA, and Stacy Stewart of the Operational Support Facility.

FEMA Director James Lee Witt spoke glowingly of the HLT support this year at the National Emergency Managers Association Conference in Charleston, South Carolina. Thanks to all HLT participants for a job well done!

*Dan Petersen, Tropical Program Specialist*

### **Marine Weather Program Offers New and Updated Products**

#### **Updated Marine Weather Charts Now Available**

All of the Marine Weather Service Charts (MSC) have been updated and are now available at the National Logistical Supply Center (NLSC) in Kansas City. In addition all MSC charts are now posted on the OM Web page at

[www.nws.noaa.gov/om/marine/pub.htm](http://www.nws.noaa.gov/om/marine/pub.htm). OM plans to release a Spanish version of MSC-14 in 1999. The charts are listed below:

- MSC1 - Eastport, ME, to Montauk Pt, NY, PA 96054
- MSC2 - Montauk Pt, NY, to Manasquan, NJ, PA 96055
- MSC3 - Manasquan, NJ, to Cape Hatteras, NC, PA 96056
- MSC4 - Cape Hatteras, NC, to Savannah, GA, PA 96057
- MSC5 - Savannah, GA, to Apalachicola, FL, PA 96058
- MSC6 - Apalachicola, FL, to Morgan City, LA, PA 96059
- MSC7 - Morgan City, LA, to Brownsville, TX, PA 96060
- MSC8 - Mexico to Point Conception, CA, PA 96061
- MSC9 - Point Conception, CA, to Point St. George, CA, PA 96062
- MSC10 - Point St. George, CA to Canada, PA 96063
- MSC11/12 - Great Lakes, PA 96064
- MSC13 - Hawaiian Waters, PA 96065
- MSC14 - Puerto Rico and the Virgin Islands, PA 96066
- MSC15 - Alaska Waters, PA 96067
- MSC16 - Guam and the Northern Mariana Islands, PA 96068

*Richard May, Assistant Manager  
Marine Weather Services*

#### **Safe Boating, Marine Weather Brochures Updated and On-Line**

The **Safe Boating Weather Tips** brochure is revised and now available at the National Logistics Supply Center (NLSC). The **Mariners Guide to Marine Weather Services** brochure has been updated for content. Both updated brochures are posted on the OM Web page at [www.nws.noaa.gov/om/nwspub.htm](http://www.nws.noaa.gov/om/nwspub.htm). The **Mariners Guide** will be split into two separate brochures this winter:

- **Mariners Guide to Marine Weather Services Great Lakes**
- **Mariners Guide to Marine Weather Services Coastal Offshore, and High Seas.**

We will send drafts of the brochures out to the relevant marine WFOs and regions for comment by early 1999. Both drafts have been almost entirely rewritten due to NWS modernization changes, and recent advances in marine weather dissemination.

The revised **Mariners Guide** brochures should be available at NLSC and posted on our Web page, by mid 1999.

*Richard May, Assistant Manager  
Marine Weather Services*

## NWS Marine Product Dissemination Information

An "NWS Marine Product Dissemination Information" page is now available on the Web. The page details the availability of NWS marine products from a mariner's perspective. Included are descriptions of systems, broadcast schedules, etc. The page also provides links to marine text, radiofax products and related information. Offices are encouraged to provide links to this page and inform the public of its location. The page address is:

<http://www.nws.noaa.gov/om/marine/home.htm>.

Any questions? Please e:mail or call Tim Rulon, 301-713-1677 x128; Fax: 301-713-1598

[timothy.rulon@noaa.gov](mailto:timothy.rulon@noaa.gov)  
[marine.weather@noaa.gov](mailto:marine.weather@noaa.gov).

*Timothy Rulon, NOAA Corps*

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## NWS Tests New Winter Weather Severity Index to Improve Service

This winter season, NWSFO Cheyenne, WY, will be testing a new system for communicating the impact and severity of winter weather. The test, which will run from December 1, 1998, to April 30, 1999, is designed to help residents better understand the impact winter storms are expected to have on their area.

The test will include southeast Wyoming and the Nebraska Panhandle. The newly designed system categorizes winter weather events on a 5-point scale, from WX1 to WX5. It capitalizes on easily identifiable numeric values, which many people find simpler to relate to and understand. It was devised to more effectively convey the *impact of forecast winter weather events and facilitate the decision-making process.*

As certainty of a developing winter storm increases (usually 6-18 hours prior), forecasters will issue a WINTER WEATHER ADVISORY for observed or forecast weather up through WX3 conditions, and/or a WINTER WEATHER WARNING for WX4 and WX5 conditions. This new product will describe the weather situation for the entire storm area and identify areas expected to be impacted by each category of winter weather severity, using the guidelines listed below. Staff will not issue the traditional Advisory and Warning products (e.g., Blowing Snow Advisory, Heavy Snow Warning, etc.); however, when conditions warrant, the term "blizzard" will be used within the body of the text

describing the storm, since this term has widespread acceptance and significance.

- **Category 1: (WX1) Minor Inconvenience—***Occurrence of winter elements (e.g., snow, cold, etc.) considered "routine or typical" to the forecast area. No significant exposure or travel concerns for most people or organizations with normal preparation.*
- **Category 2: (WX2) Inconvenience—***The combined effect of the weather elements during a winter storm of this category would probably only adversely impact those directly exposed (i.e., outside). Traffic may be slowed at times, but most importantly, exposure to the weather elements for an extended period of time could be "dangerous."*
- **Category 3: (WX3) Significant Inconvenience—***Direct exposure to the elements for a short period of time can be "dangerous," and for an extended period could be potentially "life-threatening." On lesser-traveled roads, travel may become impossible due to blowing and drifting snow, accumulated ice, etc. On busier roadways, travel may be significantly slowed by the same elements.*
- **Category 4: (WX4) Potentially Life-Threatening Unless Well-Prepared—***Direct exposure to the weather for more than a short period of time could lead to loss of life. Travel on secondary roads could be severely impacted and may become impossible due to excessive drifting snow or ice accumulation. Travel would likely be difficult at best on primary roadways. In some locations, travel may be possible only in specially equipped vehicles (i.e., 4-wheel drive vehicles or cars with chains). Some schools and non-emergency related businesses in the hardest hit areas may choose to close.*
- **Category 5: (WX5) Life-Threatening—***Exposure to the weather elements for even short periods could be deadly. Disorientation may result due to "white-out conditions." Travel would be severely impacted and may not be possible in some areas, even on major roads, for an extended period of time (i.e., 12 hours or more). Additional potential secondary dangers may include the loss of service utilities to homes and businesses.*

*Mike Matthews, Public Weather Program Manager*

## **TECHNOLOGY AND FORECAST SYSTEMS**

### **Nationwide AWIPS Deployment Approved by Commerce Secretary**

The Secretary of Commerce has certified that AWIPS Release 4.2 should be developed and that AWIPS deployment will be completed within the \$550 million congressional budget cap. This certification was a precursor to signing Key Decision Point 4, the agreement to complete AWIPS deployment.

With this decision, by the end of June 1999, AWIPS will be deployed to all WFOs except Caribou, ME, and Key West, FL; all RFCs; six of the NCEP; all Regional Headquarters; the NWS Training Center; and National Headquarters. Caribou and Key West will be delivered in July 1999 as a late addition to the AWIPS contract. Release 4.2 will undergo a 6-week Operational Test and Evaluation ending in June 1999. This release will contain sufficient functional capabilities to commission AWIPS and begin decommissioning AFOS and other legacy systems.

AWIPS is now installed at 87 sites, including four Regional Headquarters, National Headquarters, and the NWS Training Center.

Offices that have AWIPS were sent Release 4.0.1 in May and June; maintenance releases 4.0.2 and 4.0.5 followed. Offices started receiving Release 4.1 in mid-November. This release includes the initial LDAD component.

An Independent Review Team evaluated plans for Builds 5 and 6. Based on the team's recommendations, Build 5 will include substantial forecast tools to enhance WFO efficiency and effectiveness. Field office and the regional staff now using AWIPS will help determine detailed requirements for Build 5 this spring. This Build likely will include the Interactive Forecast Preparation System and a version of the Warning Decision Support System. These systems will help forecasters monitor severe weather and generate forecasts and warnings more efficiently.

*Robin Radlein, AWIPS Program Manager*

### **GOES-WEST Satellite Quickly Upgraded in Response to Failure Signs**

In mid June, the temperature of the Attitude and Orbit momentum wheels in GOES-West exceeded operational limits, signs of imminent spacecraft failure. NESDIS spacecraft engineers took immediate action to protect the satellite from going out of control.

In July, NWS and NESDIS staff met to review replacing GOES-9 with GOES-10 as the GOES-West system. Participants determined the location of GOES-10 and timelines for getting its products and services to the users (e.g., NWS, FAA, DOD, and commercial weather companies).

GOES-10 became operational July 24, moving westward about 1 degree per day. The satellite's products and services capability was established 2 weeks after it became operational. GOES-10 arrived at the operational location, 135W, August 21.

*James Heil, Satellite Meteorologist*

### **GOES Assessment Meeting Reviews Science and Operations Tests**

OM organized and led the 2nd Annual GOES Assessment meeting in Silver Spring, MD, November 4-5, 1998. The meeting drew close to 40 participants including representatives from NESDIS, all the NWS regions, the NWS Office of Hydrology, NCEP and NASA. The participants reviewed the strengths, limitations and operational value of GOES imagery and sounder products.

One highlight of this year's meeting was a review of the GOES-10 Science and Operations test which ran from March 16 through April 12 of 1998. Some significant conclusions from the test include the following:

- There was substantial evidence to support the assertion that rapid interval GOES imagery provides significant improvement to weather analysis and forecasting, including the reduction of lead times and improved areal definition for warnings
- The addition of a third GOES satellite, centered over the continental U.S. would substantially improve the quality of weather watches and warnings
- Many derived products, used by forecasters and numerical forecast models, would be enhanced by rapid interval data
- The NWS AWIPS system is capable of processing 5-minute interval GOES data.

*Jim Gurka, Satellite Program Manager*

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## GOES-10 Test Affirms 5-Minute Imagery for AWIPS Capabilities

The spring 1998 Aware highlighted the use of GOES 5-minute imagery during tornado events. The results of this test have already been incorporated into the requirements for the next generation of GOES spacecraft and instruments. Because the 5-minute imagery updates proved its value in daily forecasting, new GOES requirements include 5-minute updates as the normal mode of operation, with the added capability of doing 1-minute and 30-second updates over a smaller area.

The 5-minute updates will enable forecasters to quickly capture the mesoscale features leading to severe weather. The satellite updates can be correlated with the WSR-88D storm relative updates, both having a similar time-rate of change. Changes in cloud signatures may enhance the lead time on watches and warnings. Further studies are needed to develop performance measures.

The test also proved the capability of AWIPS to use the data successfully. Initially problems were encountered because AWIPS was designed to process and display GOES data at 7.5-minute intervals, not 5-minute intervals. This new data rate stressed the AWIPS system, but in doing so, allowed the system engineers to develop better ways of handling the data at the AWIPS workstation.

GOES-L is scheduled to be launched on March 31, 1999, plus or minus 30 days. Depending on the health of GOES-East, it might be possible to collect case study data showing how the 5-minute updates will benefit the forecast process. A test of the "priority-interrupt" imaging capability is planned during the science test period of the on-orbit check-out program. This relatively new capability, presented by NASA at the recent NWS Annual GOES Assessment meeting, "could be simultaneous with weather radars, all day, every day."

*James Heil, Satellite Meteorologist*

## SCIENCE AND TRAINING

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### NWS Has Implemented National Strategic Training and Education Plan

A new National Strategic Training and Education Plan (NSTEP) has been implemented. NSTEP outlines the process for determining and prioritizing training needs.

Under NSTEP requirements, training requirements originate in the field and then are prioritized by regional and national staff. Once needs are determined, the national training facilities develop and implement new training.

This process helps allocate limited resources where the need is greatest. Developing NSTEP was a cooperative effort among the Regions, NCEP, and Headquarters.

As part of NSTEP, NWS develops Implementation Plans yearly to define training priorities. To develop the plan, field representatives identify and prioritize new and unmet training needs. The Team then allocates available funds where the need is greatest.

To ensure support for these priorities and to obtain human and financial resources, The team seeks consensus on the final plan with the Training Centers via conference calls. Each annual plan is formally approved by upper national and regional management.

Finally, the Team ensures upper management is aware of critical requirements that cannot be met due to lack of funds. The plan spells out second tier priorities that should be considered as soon as possible. NSTEP is accessible via the Web at: <http://meted.ucar.edu/index.htm>.

*Eli Jacks, Training Program Leader*

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### CSTAR Achieves Results in 1998; CIs Produce New Products

The NWS, through the Collaborative Science, Technology, and Applied Research (CSTAR) Program, is supporting five Cooperative Institutes (CIs) at universities across the country. The program consists of the following CIs:

- Regional Prediction, University of Utah
- Pennsylvania State University
- Tropical Meteorology, Florida State University
- Applied Meteorological Studies, Texas A&M University
- Climate Studies, University of Maryland.

The CIs conduct an array of applied collaborative research which benefits the entire meteorological community. Some of the benefits derived from this research during the last 6 months include:

- Improvements to WSR-88D precipitation algorithms in the Intermountain West
- Improvements of tropical cyclone algorithms for eventual use in research and operational hurricane prediction models
- Better understanding of the Jarrell, TX, tornado event based on intensive numerical model studies
- Development of components for a "universal" Model Output Statistics system
- Improvements of numerical weather prediction techniques in regions of complex terrain.

Additional research projects are ongoing. Each CI works closely with NWS forecast offices and regions, and further benefits from these interactions are expected in the future.

*Sam Contorno, Meteorologist, CSTAR/AWJPS*

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## Comet Case Study Library Additions

Three new case studies, described below, have been added to the COMET Case Study Library. They can be accessed at <http://www.comet.ucar.edu/resources/cases/>. The studies include data from the WSR-88D radars, GOES-8 and -9, NCEP models, NWS Family of Services, and surface and upper-air observations. In addition, training support material has been provided to give offices access to lab exercises, additional data, and references. These cases may be downloaded using the CODIAC system. More information is available about COMET Cases at <http://www.joss.ucar.edu/cometCases/>.

Case 010 focuses on the "Southeastern US Severe Weather and Jarrell Tornado" that occurred May 17, 1997. This case covers a wide range of convective weather extending from Texas and Oklahoma to Tennessee and Alabama. During this time, a tornado touched down in Jarrell, TX, and squall lines, bow echoes, and other MCS were observed over the southeastern United States.

Case 011 provides data from the "Fort Collins, CO Flood" that took place on July 18, 1997. This was an unusual event for the location in that the storm environment could best be described as "tropical" as the dew point temperature approached 60°F with temperatures in the 80s. These tropical conditions lead to efficient precipitation mechanisms. Enhanced duration and intensity of rainfall combined with urban runoff complexities and resulted in a major hydrologic response. This case has been presented in the COMET Hydrometeorology course.

Case 012 covers "Gravity Waves" from March 27, 1994. This case spans the tornadic outbreak on Palm Sunday, March 27, 1994, in Alabama. Gravity waves were triggered with deep convection that developed in northeastern Texas. The waves modulated mesolows that developed along a cold front and acted to force the severe convection in Alabama. This case has been used in the COMET Mesoscale Analysis and Prediction (COMAP) course.

In addition to the new cases, the first three case studies in the Case Study Library are now available for browsing and ordering through FTP download through the CODIAC system. They were formerly only available in their entirety on 8mm tape.

The complete list of cases available through the Web interface includes:

- COMET Case Study 001, The Storm of the Century, March 11-13, 1993
- COMET Case Study 002, Midwest Snow Event, December 6, 1995
- COMET Case Study 003, Hurricane Erin, August 1-3, 1995
- COMET Case Study 004, Bow Echo, May 5, 1996
- COMET Case Study 005, Lake Effect Snow, January 4-5, 1995
- COMET Case Study 006, Chicago Flood/Oakfield F5 Tornado, July 17-19, 1996
- COMET Case Study 007, High Plains Snow, March 13-14, 1996
- COMET Case Study 008, California Flood, December 31, 1996 - 3 January 1997
- COMET Case Study 009, Severe Icing Event, March 6, 1996
- COMET Case Study 010, Southeastern US Severe Weather, May 26-27, 1997
- COMET Case Study 011, Ft. Collins Flood, July 28-29, 1997
- COMET Case Study 012, Gravity Waves, March 27-28, 1994.

*Elizabeth Page, COMET*



# NOAA Weather Radio Initiatives

## Status of NOAA Weather Radio 2000 Implementation

NWS deployed the last scheduled NWR system to Caribou, ME, in early November as planned. Key West, FL, will receive a system in late February 1999, reflecting its change in status. The Key West system will come via the Kansas City Training Center after a tour of duty at the American Meteorological Society Conference. Many sites are now on the air with the synthesized voice.

### CRS Voice Study Team

The CRS Voice Improvement Study Team presented results to NWS Director Jack Kelly on July 17. The report offered general and technical recommendations. Specifically, the team recommended that NWS implement a voice concatenation capability for warnings and address three other critical issues:

- Community outreach
- Transmitter alignment
- Operator (on-site) proficiency.

Each of these three areas were addressed by an attachment. An outreach guide was compiled for distribution to local offices. An OML was produced to address operator proficiency at a local level, and system alignment was addressed by clarifying elucidating requirements for alignment procedures.

### Voice Improvement Status

It was decided in August at the Regional Directors' Budget Conference to defer voice improvement work until at least FY 2001. The CRS Study team's recommendation to proceed with voice concatenation for warning dissemination was presented during the conference. It is up to local sites to fine-tune the pronunciation dictionary.

### Developmental Work: Spanish

The requirement by NOAA and DOC that NWR have a Spanish broadcast capabilities has been re-emphasized. NWS has revitalized efforts to design an approach for this capability and to define where it will be implemented.

*Joanne Swanson, CRS Program*

## NWR-SAME and EAS

In 1997, NWS sent the Federal Communication Commission (FCC) a list of proposed changes to EAS (see below). Other groups also submitted proposed changes. The FCC expects approval of NWS proposals but needed industry review before granting approval. An unrelated cable TV issue stalled the FCC ruling on the proposed EAS changes. The FCC hopes to resolve this issue in early 1999 and approve the entire rule change package, including the NWS proposals. Here is a brief summary of the key NWS proposals:

- Allow EAS equipment to log the receipt of only those event codes for which the specific unit is programmed to process. This change will allow the NWS and others to use EAS and non-EAS event codes freely for testing and exercises without causing the media's and others' EAS equipment to log the receipt of the codes or to process them in some other unwanted way.
- Adopt a naming convention for how certain messages will be defined and coded. In other words, specify the uses for Warnings, Watches, Emergencies (future applications that do not fit the Warning/Watch definition but are important and may require public response), and Statements. Limit the use of the third letter in the event code as follows: W for Warnings; A for Watches; E for Emergencies; and S for Statements.
- Update the list of EAS event codes. This list contains all the currently authorized codes used by the EAS and NWR-SAME but adds many new non-weather-related codes including, but not limited to, Avalanche, Volcano, Immediate Evacuation, Shelter In Place, Civil Danger, Radiological, and Hazardous Materials. Some new weather-related codes include Coastal Flood and Special Marine Warning. The current Tornado Warning (TOR) and Severe Thunderstorm Warning (SVR) will be replaced with TOW and SVW, respectively, in keeping with the bullet above.
- Reserve special state and county numbers not defined by the FIPS (Federal Information Processing Standards) for the oceans, Gulf of Mexico and Great Lakes.

*Rod Becker and Ron Berger, Meteorologists,  
Dissemination Services Program*

# Hazards Community Forum

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## Southern Region Plans First NWS EMWIN Users Workshop

The first EMWIN Users Workshop was held in Houston, TX, December 4-5. The Workshop was jointly sponsored by the Harris County Appraisal District (HCAD), Harris County Office of Emergency Management and NWS Southern Region.

HCAD and Harris County Emergency Management jointly operate an EMWIN rebroadcast system and have been leaders in promoting EMWIN use.

An increasing number of emergency managers and customers from Puerto Rico to Australia are down linking EMWIN data from the GOES 8 and 10 satellites. Dozens of localities are rebroadcasting the data on UHF or VHF frequencies, with a large number of rebroadcast sites located in the Central and Southern Plains.

Planned Workshop topics included:

- Technicalities downlinking and rebroadcasting data
- Types of EMWIN software that can be used to display forecasts, watches, warnings and satellite data
- Software requirements for sending EMWIN products to e:mail/fax/voice messages/and to run display pagers.

*Jim Purpura, WCM, NWS30 Norman, OK*

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## Storm Data Now Offered On-line With Search Engine

The National Climatic Data Center (NCDC) has developed a searchable database on the Web from *Storm Data* files. NCDC started the project to link the WSR-88D Doppler Radar Image Archive and the *Storm Data* Archive. A Common Gateway Interface script was created to search the database from parameters specified in a Hyper Text Markup Language search page. Currently, the library consists of data from 1/1/96 to the present. NCDC is exporting *Storm*

*Data* from 1991-95. NCDC plans to add earlier data including the Tornado, Hail and Thunderstorm/Convective Wind Archives from the Storms Prediction Center.

Please take the time to visit this Web site at:  
<http://www.ncdc.noaa.gov/ol/climate/climateproducts/stormdata.html>.

*Stuart Hinson, Meteorologist,  
Assistant Editor, Storm Data, OSD*

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## Northwest Holds La Niña Forum

The NWS held a Pacific Northwest La Niña Forum in Seattle on September 11, one of nine such La Niña presentations around the country. Ants Leetmaa of the Climate Prediction Center was the keynote speaker. Leetmaa gave a presentation on La Niña and the outlook for likely adverse winter weather in the Pacific Northwest.

David de Courcy, FEMA Region X Director, helped lead a discussion with the Federal, state, county, local and business emergency management officials on ways to minimize the impact of La Niña. Media coverage also helped spread the word about La Niña to the public.

The La Niña Forum was part of NWS Seattle's annual media/emergency management workshop held to prepare for the coming winter season. The workshop's other topics included the following:

- Update on the NWS modernization, including a demonstration of the recently installed AWIPS
- Introduction to segmented long-fuse warning products
- Review of the flood warning forecast system
- Roundtable on enhancing NWS products and services.

*Ted Buehner, WCM, NWS30 Seattle/Tacoma, WA*

## Alaska NWSO Undertakes Massive Survey to Evaluate Product Value

Last year, the local NWS Forecast Office in Juneau, AK, surveyed more than 1,100 residents to evaluate the format and terminology NWS uses to write public weather forecasts. The questionnaires were designed to serve as an educational tool for the public as well as for Juneau's forecasters. This is the largest study of its type published to date.

To cover different aspects of local public weather service, NWS used three different questionnaires. Several questions focused on the respondents' general understanding of the probability of precipitation (POP) statement NWS uses in public forecast products. Other questions addressed:

- Perception of accuracy
- Understanding of forecast terminology
- Usefulness of forecast products
- Preparedness for adverse weather conditions, such as tsunami events.

A report containing the results of this project, *NOAA NWS Alaska Region Technical Memorandum #45*, including sample questionnaires and comments received from the respondents, may be obtained by contacting the authors, Aimee Saviers and Larry Van Bussum, at NWSFO Juneau. (907) 586-7491; e-mail: [Aimee.Saviers@noaa.gov](mailto:Aimee.Saviers@noaa.gov) and [Larry.VanBussum@noaa.gov](mailto:Larry.VanBussum@noaa.gov). The NWS Alaska Region Home page also offers a version of this paper at <http://www.alaska.net/~nwsar>.

*Aimee Saviers, Larry Van Bussum, Meteorologists,  
NWSFO Juneau, AK*

## Salt Lake City Tests New Flash Flood Product for Longer Range Warnings

Because of the high threat of flash floods in southern Utah during the summer, the NWS, in conjunction with Flash Flood Awareness Week, began issuing a new product on July 20: The Flash Flood Potential Rating. This product is based on forecasted meteorological conditions over this high threat area.

This rating is designed to give advanced notice of flash flood potential beyond what is possible with a watch or warning. The Rating is issued twice daily for southwest and southeast Utah, covering the next 2 days. It is updated when conditions warrant. The flash flood potential for each day is expressed as LOW, MODERATE, HIGH, and VERY HIGH. The Rating is issued during the summer thunderstorm season, usually until mid-September. Below is an example of the new product:

### FLASH FLOOD POTENTIAL FOR SOUTHERN UTAH

	SOUTHWEST UTAH	SOUTHEAST UTAH
.TODAY...	LOW	MODERATE
.WEDNESDAY...	MODERATE	HIGH

- LOW generally indicates that the risk of flash flooding is minimal.
- MODERATE says that thunderstorms will be developing and isolated incidents of flash flooding is possible.
- HIGH is used for scattered thunderstorms with areas of heavy rain and possible widespread flash flooding.
- VERY HIGH is used for significant probability of flash flooding over wide area. This rating is rarely used.

Because of the nature of thunderstorms and flash flooding, even a VERY HIGH rating does not mean that flash flooding will occur in a given location; however, the rating does give park rangers, safety officials, emergency managers, and the public a tool for planning. Of course, flash flood watches and warnings are still issued for specific areas as danger becomes imminent.

The Flash Flood Potential Rating was coordinated with the National Park officials and the Utah Division of Comprehensive Emergency Management. The product has been well received by customers, including the media. Television stations are broadcasting the product daily in their weather segments. The ratings also are placed on the NWSFO Salt Lake City Web site and are broadcast over NWR.

*David Toronto, WCM, NWSFO Salt Lake City, UT*

## FEMA Project "IMPACT" Helps Rural Montana Improve Alert System

As part of FEMA's focus on helping communities prepare for natural disasters, it has established a special program known as Project "IMPACT."

After 3 years of heavy flooding and a number of strong microbursts generated by severe thunderstorms, Lincoln County, a rural area in northwest Montana, applied for assistance from this project.

NWS has been trying to establish a network of early warning "Alert" weather stations near the towns of Libby and Troy in Lincoln County. NWS-owned Alert stations were proposed for the Flower and Calahan Creeks. These two creeks have a history of flooding in late winter and spring with significant effects on the two towns.

To discuss options, NWS staff met with County Commissioners, the County Coordinator of Disaster and Emergency Services, and the Safety of Dams Coordinator for the Salish and Kootenai Tribes. The tribes offered to install and maintain the Alert stations, using experience gained from a network of similar equipment in adjacent counties. This tribal Alert network is an extensive and valuable resource to NWS warning and forecast programs.

Project IMPACT funding allowed Lincoln County to enhance its weather monitoring and warning dissemination systems. Specifically, the county bought the following:

- Radio paging encoder for the Emergency Operations Center (EOC)
- High frequency HAM radio for the EOC
- EAS encoder for the County Sheriff's Dispatch Office
- AM radio "Alert Broadcast System" recorder for the Dispatch Office
- Early warning dam failure detection device (for Flower Creek Dam)
- Remote stream gauges and repeaters for two critical streams (Flower and Calahan Creeks)
- "All Hazard" warning siren for the public warning system in Libby.

IMPACT funding also will purchase Alert weather stations for the key locations identified by the NWS and Lincoln County. Installations are scheduled for late summer and early fall. Mountain top radio repeaters will send the weather and stream gauge information to the Missoula NWSO. The message will then be relayed to the Northwest RFC in Portland through a direct link to our Hydromet computer.

This new network will greatly enhance the NWS's ability to monitor developing weather and flood scenarios and provide more effective warnings and forecasts.

*Peter Felsch, WCM, NWSO Missoula, MT*

## FEMA Disaster Funding Helps Purchase EMWIN for Montana

By this fall, 27 EMWIN units will be deployed throughout Montana. Sites include the State EOC and nearly half of the Montana county EOCs.

Montana has always suffered from an extremely primitive communications system for NWS products. Dissemination to the state emergency managers (EMs) relied on the National Warning System. To reach county EMs, the state EOC had to manually enter information on the law enforcement network. Only selected warnings and watches were disseminated; details, such as the warning basis, usually were eliminated. With Montana's population at approximately 1 million and most of its 56 counties well below 10,000, the cost of upgrading the system has been prohibitive.

EMWIN provided an extremely salable product to address this issue. Although initial purchase costs, low as they were, were still prohibitive for some counties, the lack of recurring costs allowed for a "one-time purchase" proposal. The huge amount of weather information provided by EMWIN far surpassed anything else previously available. Outreach efforts convinced both state and county EMs that EMWIN was a viable solution to a serious problem. The system sold itself, but funding remained a problem.

Record flooding throughout Montana in the spring of 1997 provided a creative solution to the funding issue. The state Department of Emergency Services, president of the Montana Association of Counties, and I were all part of the Hazard Mitigation Team set up by FEMA to address the flooding. We provided a united front in getting the Mitigation Team to place EMWIN funding as its top recommendation for hazard mitigation. Although FEMA would fund EMWIN as "hazard mitigation," the strong state support garnered enough funding from discretionary FEMA monies to purchase EMWIN.

The same option may be available to other states and counties after a declared natural disaster. This creative approach to getting EMWIN would be particularly useful to those states and local governments with a low tax base. If you would like more details, give me a call at 406-453-2081 or send e:mail to [Lynn.Valtinson@noaa.gov](mailto:Lynn.Valtinson@noaa.gov).

*Lynn Valtinson, WCM, NWSFO Great Falls, MT*

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## NWSFO Great Falls Helps Muscular Dystrophy Association Campers

This past June, NWSFO Great Falls staff took part in the Montana Muscular Dystrophy Association's (MDA) Camp Help in the BearPaw Mountains. Journey Forecaster Joe Goudsward provided a hands-on weather lab and a presentation on access to NWS products via the Internet. His half-day presentation was well received by the participants who, because of limited mobility, could not otherwise easily access NWS information.

The 60 Muscular Dystrophy students, together with individual counselors and support personnel, brought the camp attendance to approximately 150.

Joe was impressed by the attentive group and reported the experience "to be extremely rewarding and emotional." Joe plans to attend next year's camp and will likely be acting as a personal counselor for a camper, contributing a week of his personal time to the organization and expressing beyond words the positive impact of this experience on the MDA and Joe.

*Lynn Vallinson, WCM, NWSFO Great Falls, MT*

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## NWSFO Great Falls Staff Teaches Teachers via E:mail

For the past year, NWSFO Great Falls forecasters John Blank and Chris Zelzer and SOO David Bernhardt have served as meteorological mentors to Montana high school teachers located east of the Continental Divide.

DataStreme is a teacher enhancement initiative of the American Meteorological Society, funded by the National Science Foundation. The program offers a 13-week correspondence course and Internet resources. Mentors help teachers, via e:mail, with course questions and discuss the work assignments with participants. DataStreme provides excellent outreach to the educational community, allowing NWS to build weather awareness in the best forum possible—the classroom.

Each of the NWSFO Great Falls participants mentored two teachers. Teachers traveled up to 400 miles to attend the three coordination meetings held at the NWSFO Great Falls office. The project was so well received that another project has been set up for the 1998-1999 school year involving the same mentors with three teachers per mentor.

*Lynn Vallinson, WCM, NWSFO Great Falls, MT*

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## NWS "Class" Wins Kudos From Wisconsin Teachers

SOO Gene Brusky and Jeff Last, NWSO Green Bay, were guest instructors at the Wisconsin Society of Science Teachers (WSST) annual convention April 23-25. WSST members are mainly from middle and secondary schools.

During our 3-hour seminar, Gene and Jeff discussed severe weather spotting and the Oakfield, WI, F5 tornado with teachers from across the state. One of the organizers commented that the seminar was one of the best of this year's convention (and one of the most heavily attended).

Gene and Jeff have a long association with Wisconsin science teachers, having been part of the successful "DataStreme Project" and as longtime members of the American Meteorological Society's "Project Atmosphere."

*Jeff Last, WCM, NWSO Green Bay, WI*

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## Washington State Declares First Weather Radio Awareness Month

Washington held its first Weather Radio Awareness Month in September. The NWS, in association with Washington State Emergency Management, conducted the awareness campaign with a specific goal in mind: NOAA Weather Radios should be as common as smoke alarms in homes and businesses throughout the state to help save lives and property from natural and man-made hazards.

The campaign timing also helped to prepare people for the coming winter storm season and the anticipated adverse impacts of La Niña in the Pacific Northwest. The awareness month included the following activities:

- Governor Locke proclaimed September "Weather Radio Awareness Month."
- The Washington State Association of Broadcasters sent an NWR public service announcement—featuring Vice President Gore—to all TV and radio stations.
- Four weather radio manufacturers offered discounts to consumers on their radios during the month.
- Schools and the emergency management community received awareness materials such as the Owlie SKYWARN weather book and Mark Trail comic series.
- The WCMs in Seattle, Spokane, Portland, and Pendleton worked with the media on the awareness campaign, including conducting interviews. Several TV weather-casters demonstrated NWR warning alarm capability in their weather segment or in news stories.

The campaign highlighted NWR's features, including the "all-hazard" concept, warning alarm, role of weather radio in the EAS, use of batteries in case of power outages, and the 24-hour availability of the latest area weather forecasts and conditions.

*Jed Buehner, WCM, NWSFO Seattle/Tacoma, WA*

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## Thousands Visit NWS Open House In Southern New England

The Myles Standish Industrial Park in Taunton, MA, was the site of the third Open House held by NWSFO Boston and the Northeast RFC, May 30-31. Between 3,000-3,500 people attended the event.

This year, some visitors even witnessed our office in action as severe weather moved into our County Warning Area Sunday, May 31. We expanded the event this year to include booths from other Federal and state agencies such as the U.S. Geological Survey, Massachusetts Emergency Management Agency, and the U.S. Army Corps of Engineers. FEMA had a Mobile Emergency Response and Support communications vehicle on-site for tours.

The NWS canopy hosted two chapters of the American Meteorological Society, the Blue Hill Observatory Weather Club, and the "Thermometer Man" from Cape Cod. Amateur radio operators offered demonstrations along with SKYWARN weather net operation on Sunday.

The event was held in tents outside NWS offices and in the NWS conference room. Workshops offered visitors the chance to learn more about the variety of weather and river conditions to expect across New England. Every half hour, a different topic was covered including:

- Raging Waters: River and Flood Forecasting
- The History of Weather Forecasting
- The Forecast Process
- Severe Storms
- Hurricanes and their Effects on New England.

We also held a live Internet demonstration of our Web site. Several videos were shown, including the NOAA informational tape and the Andover, KS, tornado of 1991. In addition, visitors had the chance to walk through the of-

fices to see the forecasters in action and pose questions to the staff.

The highlight of the Open House was balloon launches by the Plymouth Community Intermediate School, which donated two tanks of helium. The students from the Weather Club showed a radiosonde and explained how it collects data and sends the information back to the ground for use in weather forecasting. One of the balloon launches featured an active radiosonde. This sonde sent back a signal that included temperature and altitude data. Radio operators from as far away as Pennsylvania and New Jersey picked up the transmission.

Though Owlie SKYWARN could not visit the Open House this year, he was the feature for our children's coloring contest, which drew nearly 150 entries.

Meteorologist in Charge Bob Thompson said, "The Open House allowed people in the communities we serve to see their National Weather Service in action and obtain a better idea of how part of their tax monies are being put to work. This was an opportunity to 'personalize' our service and increase exposure to some of our partner agencies who are dedicated to public safety. Our visitors had a chance not only to fulfill a natural curiosity about weather but also to see professionals who are excited about the science and who care about providing a service that so many depend upon."

*Eleanor Vallier-Jalbot, Meteorologist, Outreach Coordinator  
Doug Young, Senior Forecaster, NWSFO Taunton, MA*

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## Marine Weather Services Emphasized in Forecaster Training Workshop

NWS Western Region held a marine forecaster training workshop for NWS meteorologists, June 23-26, at the Naval Postgraduate School (NPS) in Monterey, CA. The student body consisted of 13 forecasters and one Port Meteorological Officer (PMO) from west coast NWS offices. The workshop's objective was to update staff at West Coast NWSFOs with marine weather services programs, spin up NWSOs, and PMOs on atmospheric and oceanographic sciences. Students could learn how to provide a higher level of services to marine customers.

Subject matter specialists came from the Marine Prediction Center, National Data Buoy Center, Pacific Marine Environmental Laboratory, and Environmental Techniques Laboratory, Scripps Institution of Oceanography, University of California Berkeley, NPS, Naval Research Labs, and the Fleet Numerical Meteorology and Oceanography Center. Speakers also included the Oakland PMO and a local commercial fisherman. Topics covered included:

- Customer requirements and perception of services
- Remote data gathering
- Atmospheric and oceanographic numerical modeling
- Eastern Pacific oceanography
- Recent research, such as the Cal Jet project.

NPS faculty developed two forecasting lab sessions so participants could apply their newly acquired knowledge. The course was supported with headquarters funding for collaborative workshops and training opportunities. This was the first year these funds were made available. Based on the success of this workshop and the positive feedback from students and instructors, Western Region Headquarters hopes to conduct a similar marine weather training program in 1999. This program sensitizes forecasters to the current state of oceanographic and meteorological sciences, particularly the interaction and influence of the two in the complex coastal zone. This knowledge, in turn, benefits NWS outreach activities to marine customers.

*Tom Ainsworth, WCM,  
Marine Weather Program Manager, WRH*

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## California Offices Win Awards of Excellence for El Niño Work

The California Emergency Services Association (CESA) selected the NWS Los Angeles/Oxnard and Monterey Offices for a 1998 Special Recognition Award. This award is presented to an individual or organization that has made a significant contribution to the field of emergency management and response. The NWS staff provided an exceptional level of service in offering public outreach programs and special interest presentations. They responded to news media requests and a plethora of calls during El Niño storms.

The Special Recognition Award was presented at the CESA Annual Awards Banquet on September 24.

## WCM Wins Highest Local Award

In addition to the group award, WCM Tim McClung, NWSFO Los Angeles/Oxnard, won a Diamond Award from the Southern California ESA (SCESA). The Diamond Award is the group's highest honor for a nonmember. It is awarded for outstanding service in emergency management.

Last fall and winter, Tim conducted more than 100 briefings for emergency management, political and public groups on El Niño and its expected local ramifications. Tim remained in contact with these constituents throughout the winter, providing daily updates or briefings when needed.

"It is a great honor to receive this award from SCESA. The staff at NWSFO Los Angeles/Oxnard issued remarkably accurate weather forecasts this past winter, some several days in advance. This type of specific, accurate and well advertised storm prediction is exactly what our customers need to best accomplish their missions, and I'm happy to accept this award on behalf of all of our staff."

*Tim McClung, WCM, NWSFO Los Angeles/Oxnard, CA*

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## Project Impact in Aberdeen, SD

Recently, the city of Aberdeen was selected by FEMA as a "Project Impact" site. The signing ceremony was held December 2. The city was given approximately \$500,000 to foster private and public partnerships. NWSO Aberdeen has played a major role as it helped provide crucial hazardous weather mitigation and educational background information for Aberdeen at the project's subcommittee meetings. Project Impact serves as a model for other communities in South Dakota to become more disaster resistant.

*Hector Guerrero, WCM, NWSO Aberdeen, SD*

# Publications and Audiovisuals

## 1996 Natural Hazard Statistics Now Available on OM's Home Page

Weather and flood-related hazards in 1996 claimed 540 lives, injured 2,711 persons, and cost nearly \$8 billion in property and crop damage. Flooding accounted for the greatest number of fatalities with a total of 131, followed by winter storms/blizzards with 86 fatalities. In 1995, summer heat rather than flooding claimed more lives with 1,021 deaths. The 11-year average for weather-related fatalities is 473. The 30-year average for flash floods/floods fatalities is 138; for lightning, 83; tornado, 70; and hurricanes, 24.

Of the 540 weather-related fatalities, two-thirds (366) were males and one-third (168) were females. Eighty-six percent of the male fatalities were between the ages of 10 and 79. Male fatalities out paced female fatalities in all the categories except the 80+ age group.

In 1996, the deadliest weather month was January, with 98 fatalities, followed by July with 73, February with 63, and September with 59. Many of the January deaths occurred during the "Blizzard of '96."

Florida, Pennsylvania and Texas were the most hazardous states weatherwise to live in during 1996. North Carolina received the greatest amount of property damage, more than \$1.5 billion, thanks to Hurricanes Fran and Bertha. Texas crops received the most damage: \$568 million in lost revenue.

For the complete report, see <http://www.nws.noaa.gov/om/hazstats96.htm>.

*Linda Kremkau, Managing Editor*

## NWS Publications

The following 10 NWS brochures have been reprinted and are available from the National Logistics Supply Center:

<u>NOAA PA</u>	<u>NAME</u>
92055	Advanced Spotters' Field Guide
97050	Basic Spotters' Field Guide
92052	Tornadoes...Nature's Most Violent Storms
92050	Flash Floods and Floods...The Awesome Power

91002	Winter Storms...The Deceptive Killers
94050	Hurricanes...Unleashing Nature's Fury
82004	Watch Out, Storms Ahead
86001	Natural Hazard Watch/Warning Poster
92051	SKYWARN Decal
96071	Atlantic Hurricane Tracking Map, 8.5" x 11"

There should be sufficient stock to last through 1999. No funds will be available in FY 99 for printing.

A word of caution—we want to stress to field offices to be frugal in the use and distribution of these publications. It would not be wise to distribute large quantities for boat shows, large events, etc., during this time period.

Take note that most of the NWS brochures are available on OM's Home Page at <http://www.nws.noaa.gov/om/nwspub.htm>. For further information on the NWS brochures, contact Customer Service at 301-713-0090 x118.

*Linda Kremkau, Managing Editor*

## Attention WCMS: Some NWS Slide Sets Not in Public Domain!

It has come to our attention that some WCMS are providing slides from our hazard awareness slide sets to the private sector thinking that all the slides are in the public domain. This is not the case. Some of the slides are copyright. The ones that are copyright were given to NOAA for use in these slide sets only and for developing presentations. Individual use of slides within the slide library MUST have prior approval from the credited source. Please refer to the presenter's guide as to which of the slides are copyright and which are NOAA's slides. Slides marked NOAA/NWS (without individuals' names) are in the public domain and may be reproduced without approval.

If you have any questions concerning the use of any of the NWS hazard awareness slide sets, please feel free to contact me at 301-713-0090 x118.

*Linda Kremkau, Managing Editor*



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## Update on NWS Braille Booklets

During the last couple of years, HMT Carolyn Gurney, NWSO Billings, MT, has worked with contractor Jim Aldrich to convert the tri-logo publications (NOAA/ARC/FEMA) into Braille. These Braille pamphlets contain the wording of the print versions; graphs and photographs are described in words. They were printed by Jim Aldrich and edited by Brian Tew, NWSO Billings. The five brochures are:

- Tornadoes . . . Nature's Most Violent Storms
- Thunderstorms and Lightning . . . The Underrated Killers
- Winter Storms . . . The Deceptive Killers
- Flash Floods and Floods . . . The Awesome Power
- NOAA Weather Radio, the Voice of the National Weather Service

When distribution is completed, all NWS offices will have two sets of the five brochures. The six Regions and NWS Headquarters will have two copies to loan out.

*Linda Kremkau, Managing Editor*

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## North American Natural Disaster Map Ready for Teachers in 1999

The North American Natural Disaster Map Project is a joint U.S./Canada/Mexico project recognizing the International Decade for Natural Hazard Reduction.

The group agreed to develop a tri-national poster map showing major natural disasters affecting the three countries. Ros Heltz, USGS, and I are co-chairing the effort; Project Coordinator is Dr. Chris Tucker, Emergency Preparedness-Canada; Mexican Chairman is Roberto Meli, Center for Prevention of Disasters.

The project started in early 1996. The original goal was to produce a map targeted to schools, with the idea that parents learn from what materials their kids bring home from school. After a year of my beating on doors at the National Geographic Society (NGS), last fall NGS published the map using our expertise and the digital database we assembled at the USGS Cartography Branch in Golden, CO.

By mid-1999, our group plans to produce a comprehensive CD-ROM for use by researchers. The NGS article included input and review from all three countries. The final selection of hazards and disasters used for the two-sided map was made by NGS's editors.

Most of the U.S. weather data came from NOAA, NWS, and the National Climatic Data Center; USGS provided most of the earthquake/volcano data. As part of a follow-up agreement, NGS has agreed to distribute copies of the map to 12,000 schools on the A and B list in their National Geographic Alliance school program in spring 1999. We will fund the development of a lesson plan keyed to the map. The newsletter also will go out to 40,000 other schools and will tell teachers where to write for a copy of the map.

*Joseph Golden, Senior Meteorologist,  
Oceanic and Atmospheric Research*

*Note: Copies of this hazard map were distributed to all NWS Regions and field offices during the summer. There is a limited amount of copies available from NWS Headquarters. If you would like a map, contact Customer Service at 301-713-0090 x119 or 112.*

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## NOAA Adds New Photo Library and History Websites

The NOAA Central Library, in cooperation with the NOAA Home Page Design and Construction Team, has added two new Internet sites:

NOAA Photo Library at <http://www.photolib.noaa.gov>. This site includes the NWS Historical Album at [http://www.photolib.noaa.gov/lb\\_images/historic/nws/index.html](http://www.photolib.noaa.gov/lb_images/historic/nws/index.html) with approximately 600 pictures of weather phenomena, equipment, and personnel. The NOAA Photo Library also offers the National Severe Storms Laboratory Album, which details the work of that organization.

NOAA History at <http://www.history.noaa.gov/>. This site includes biographies of Weather Service personnel, personal accounts of working in the old weather service, institutional histories, and even weather service poetry and art.

The NOAA Library would like to borrow photographs (35 millimeter slides preferably) to digitize and add to the photo library. The site will credit the photographer and source organization. For loaned photographs, please provide caption information such as location, date, and subject matter. The library is also seeking autobiographies and biographical sketches of Weather Service personnel, accounts of technological innovation and evolution, project histories, and accounts of significant weather events. Many individuals have contributed to these sites already. We hope

that a full cross-section of Weather Service observations, work, and accomplishments can be chronicled.

Other products that the Library has developed include:

- WINDandSEA, *an Internet guide to the atmospheric and oceanic sciences*
- NOAA Browser, which has links to over 500 NOAA organizational home pages
- Access to AMS journals.

Staff in the Silver Spring, MD, campus also have access to the Meteorological and Geostrophysical Abstracts. These are all accessible through the Library Home page at <http://www.lib.noaa.gov>.

If interested in helping develop the NOAA History Web site or loaning imagery for the NOAA Photo Library, please contact Skip Theberge, NOAA Central Library, 301-713-2600 X-124, e:mail: [stheberge@nodc.noaa.gov](mailto:stheberge@nodc.noaa.gov)

*Skip Theberge, Technical Information Specialist*

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## Standard Disaster Safety Messages

The American Red Cross hired Intern Beth Navin to develop a list of Standard Disaster Safety Messages. This work was endorsed by the National Disaster Education Coalition and was funded by a grant from the Lowes Home Safety Council.

A Message calls for a specific action or behavior. "Disaster Safety" encompasses Community Disaster Education and Mitigation messages. The public does not differentiate between the two.

Navin met with staff from the NWS, USGS, FEMA, the U. S. Fire Administration, and the National Fire Protection Association to compile the list. She also developed text to explain *why* we need each message and to help deal with folklore, myths, and misinformation.

The intent of this resource is to provide a standard reference document, in print and Web format, for use by *anyone* providing disaster safety information for the public. Users would include disaster and fire educators, public affairs/public relations professionals, mitigation specialists, managers and officers, etc., in the disaster, severe weather, earthquake community (not just Red Cross, but also emergency managers, fire departments, and many others).

*Rocky Lopes, American Red Cross*

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## Revised "Are You Ready?" Brochures Now Available

The American Red Cross, in cooperation with the NWS and other partner agencies, has updated its popular awareness-raising disaster safety brochure series. We received feedback from hundreds of users, including dozens of WCMs, as well as information from marketing surveys. The following changes have been made:

- **New cover artwork:** The cover artwork has been simplified to be easier to understand and to convey only one major message per hazard.
- **Text Easier To Read:** Text is in an easier-to-read font; safety information is now on a white background, instead of a color background.
- **Paper Stock Changed:** Materials are now printed on an uncoated paper stock that works better with rubber stamps.
- **Text Revisions:** A few disaster safety messages were updated and mitigation-related messages were added.
- **Hazard Title:** The name of the hazard appears in slightly larger type on the front.
- **Joint logos:** The brochures will still be joint-logoed with our partners at the NWS, FEMA, USGS, and the National Fire Protection Association, as appropriate.
- **Style remains the same:** We have kept safety information on the front of the brochures and interactive, fill-in-the-blank information on the back.
- **Four-color art remains.** Four-color artwork appears on the top third of all brochures. Marketing research has indicated that the public responds 28 times as much to brochures in four colors, than to materials in black-and-white.

*And here are some added bonuses:*

- **Uniform pricing.** The brochures were printed under a uniform contract by the same printer, so they have consistent pricing, at least for the first print run.
- **No Copyright.** The brochures are not copyrighted, so public affairs specialists from Red Cross chapters, emergency management offices, NWS offices, and others can feel free to "lift" the messages and use them in localized news releases and other materials. Our goal is to send a consistent message to as broad an audience as possible.

## New Way of Making Information Available in Other Languages

The Red Cross has learned a lot from its experience with printing and stocking brochures in Spanish. Fewer copies are ordered in Spanish than in English, making the price per copy more expensive. To keep costs down, we are harnessing the Internet and will provide "print on demand" capabilities soon.

What is "print on demand?" It's a new way to print materials you need locally, in the quantity that you want, at a much more affordable price. We will be printing a colorful "shell" that will have generic disaster preparedness artwork on the top 1/4 of the page. The rest of this 8½ x 14" page will be blank. The back will be blank.

To use the shell, you download and print a two-page original document of your choice (in "PDF" format) from the Red Cross site. Then load the "shell" into the paper drawer of a photocopier. You use the web printout as the original in your copier and print onto the shell back-to-back. Out come colorful, high quality, brochures. We can use this method to provide brochures in other languages, or special or localized versions of some brochures.

### Ordering Instructions

You can order quantities of the revised brochures through your *local* Red Cross chapter. Some chapters may have the previous edition of certain brochures in stock, so if you want the revised versions, ask your local Red Cross representative to place a new order for you. The list price of the brochures is \$1.50 per package of 25, plus shipping. When speaking to your local Red Cross, it is helpful to provide Red Cross stock numbers of the brochures you want:

Hurricane:	ARC 4454
Residential Fire:	ARC 4455
Earthquake:	ARC 4456
Tornado:	ARC 4457
Flood:	ARC 4458
Thunderstorm:	ARC 5009
Heat Wave:	ARC 5032

The revised version of the "Winter Storm" brochure will be available in mid-December. Talk to your local Red Cross chapter for more information and to place an order.

*Rocky Lopes, American Red Cross*

## Weather Channel "Classroom"

The Weather Channel airs a series of programs offering insights into how weather happens. These commercial-free shows are 8 minutes long; they air from 4 a.m. to 4:30 a.m. The shows offer breaks for classroom discussion. Show topics are listed below. For on-line weather education, see <http://www.weather.com/education>.

- Sun, Seasons and the Sky
- Water: Oceans to Air
- Air in Motion
- Look Up! Sky Awareness
- Thunderstorms: The Weather Machine
- Tornadoes
- Hurricanes
- Extremes in Water Cycle
- Snow, Ice, Wind & Cold
- Forecasting: Then & Now
- Climate: A World of Weather

*Laura Buss, Education Department, The Weather Channel*

## WSOM Chapter Updates and Roster

Attachment A is the WSOM Chapter updates. Attachment B is the *Aware* Roster that now includes WCMs and SOOs in each NWS Region. Telephone numbers are *listed* numbers for that office, *NOT* the direct number. If a name or telephone number has changed, please notify me at 301/713-0217. If you know someone who would like to receive the *Aware*, please have him or her contact Linda Kremkau at 301/713-0090 x118.

*Melody Magnus, Editor*

# Public Affairs

## NOAA/NWS Public Affairs Can Help You Look Better

The NOAA/NWS Public Affairs Staff is here to help you. Please give us a call and get to know us. We can help you with media and community outreach activities, such as:

- Preparing for media interviews
- Organizing Special events, such as press conferences, community outreach, open houses, etc.
- Developing media materials, talking points and Q&As
- Securing speakers and leadership attendance for special events
- Providing photographic or video support
- Locating graphics.

### NWS Public Affairs Contacts:

Randee Exler, Barry Reichenbaugh, John Leslie,  
WSH, 301-713-0622  
Marilyn Trainor, Western Region, 801-524-5692 ext. 226  
Pat Slattery, Central Region, 816-426-7621 ext. 621  
Bob Chartuk, Eastern Region, 516-244-0166  
Frank Lepore, National Hurricane Center, 305-229-4404  
Stephanie Kenitzer, NCEP, 301-763-8000 ext. 7007  
Curtis Carey, Southern Region, 817- 978-4613 ext. 140  
Delores Clark, Pacific Region, 808-532-6411  
Ruth Barritt, Alaska Region, 907 271-3442

## Strategies for Conducting Successful Media Interviews

Whether you've been asked to be interviewed on radio, TV or your local newspaper, preparation is the key to your success. A media interview is an opportunity to tell the NWS story in a positive, honest way. With a little practice, you can become an expert at handling any type of interview. The following are steps you can take to prepare for media interviews and build positive relationships with the press.

### Interview the Interviewer

First, find out as many details about the story as possible. Questions you should ask the reporter include: Has the reporter talked to other organizations? If so, who? Why is the press focusing on this story at this time (if it is not obvious)? What is the reporter's deadline? When will the story appear?

### Understand Your Audience

Know as much about the audience as possible. For instance, when working with a trade publication, ask the reporter who his/her readers are. This will give you an idea on the level of technical language appropriate. Most often you'll be facing the mass media, a group harder to define. Your audience could be young and old, doctors and high school dropouts, etc. Because of this diversity, speak in terms anyone can understand.

### Know the Interviewer

Your pre-interview research should include some insight into the interviewer. Watch this person on the air or read a few of his/her articles to gain insight into style and approach. Does the reporter tend to use multiple-part questions, hypothetical questions, open-ended questions, or loaded questions?

### Help the Reporter Help You

Before the interview, send the reporter fact sheets, news releases, and graphics. The information you supply may help elicit questions you can answer easily. Your Public Affairs Officer can help you gather needed materials. Providing background gives you another level of assurance that technical information in an ensuing article/broadcast will be accurate. You'll also score points with the reporter by making his/her job a bit easier.

Now you're ready to prepare for the interview itself. Follow these steps for a successful interview: prepare background information, develop talking points, and **rehearse, rehearse, rehearse.**

### Prepare Background Information

Most likely you'll be asked to answer questions on a specific topic such as a weather event, aspects of the weather service modernization, etc. Research the latest status of the

event or issue and get information from the key people working on the issue or event. The more you know, the higher your credibility, and the more likely that you'll be in control of the interview process.

### Develop Talking Points

Talking points are two or three key messages you want to make sure you get across to the audience. For example, when discussing a severe weather situation, work in the positive angles about how well the new models are working in these scenarios. Don't develop too many talking points, or you may feel overwhelmed trying to work them all in. Two or three points should be the maximum. Focus on the major points you want to make. Ask yourself, "If the reader/viewer is left with one message, what should this be?"

**Remember: 3 x 3 = 1. Three messages said three times equals one message in the story.**

Write down your points and review them several times before the interview. For telephone interviews, keep these points in front of you. For live interviews, have in mind a few key words that will trigger your memory, then find a way to insert the talking points into your first couple of responses. This way, the time-pressed audio and video tape editors are likely to use some of what you want to convey.

### Rehearse Carefully

Rehearse. Rehearse. Rehearse. This will not only build your confidence level but may identify pitfalls. It is helpful to conduct a rehearsal interview where you are *challenged* with tough questions by someone from public affairs or by one of your colleagues. Ask them to develop "dirty questions" for you to answer. This is not an uncommon practice; every VIP, these days, is put through his or her paces by office staffers. Your Public Affairs Officer is a great resource for developing appropriate answers to tough questions. Decide on answers that sound best to your fellow weather service "briefers."

### During the Interview

#### Remember Your Talking Points

Be sure to insert your talking points. Use them as bridges to address the question at hand. Remember that repetition helps your points to stick. Reword your talking points in different ways and use them repeatedly throughout the interview process. At the same time, be careful you don't come

across as an automaton who provides the same answer to every question.

The following *simplified* scenario illustrates this point. Note that the talking points are boldfaced.

REPORTER: What is the latest information on the weather conditions in California?

NWS SPOKESPERSON: There is an extremely powerful frontal system coming off the Pacific Ocean. **We've been keeping an eye on the storm with the National Weather Service's Doppler Radar and NOAA satellite images—all a part of our technologies that provide better, more accurate warnings and forecasts.** We're recording rainfalls in excess of four inches in San Francisco and flooding in the surrounding areas...

REPORTER: Do you think the rains will continue into the week?

NWS SPOKESPERSON: **The National Weather Service models improve our forecasters ability to predict weather conditions.** The models indicate that storms will continue in California for at least a few more days.

### Stay in Control

You are in control and the expert. Keep cool when confronted with a false charge, but do not let outrageous statements go unchallenged. The audience will be on your side. In such situations concentrate on what you want to say and the points you want to make. Your audience is the viewer/reader, not the interviewer.

### Keep It Short and Simple

In the age of "sound bites," the best policy is to keep your answers to 30 seconds. Short, clear answers are most effective for the broadcast media. On the other hand, for the print media keep your answers simple but realize that you have a greater opportunity to explain the topic in-depth, depending on the reporter's time and attention. Remember that although you are the expert, don't talk down to your audience and make sure the information you provide is understandable. Avoid acronyms and jargon. If a question can't be addressed with a simple answer, do your best to provide needed details while staying brief. Again, employ fact sheets, etc., to help with technical explanations.

### Honesty is the Only Policy

To protect your credibility, respond with the truth. Do not give the reporter or your audience a reason to suspect that your facial expressions or body language might mean

you are being dishonest. Remember, you could lose your reliability as a continuing news source. Don't be afraid to say you don't know the answer. Stick to the facts and don't be coerced into speculation. Be assured that if you lie you will be found out. If that happens, you lose ALL credibility.

### Admit a Mistake

If your office makes a visible error, admit the mistake. If possible, before the interview, seek guidance from the appropriate local/regional program manager and Public Affairs Specialist. In the interview, comment on it briefly and follow up with an explanation of what the NWS is doing to ensure that the problem gets corrected.

### Off the Record

There is no such thing as "off the record." This includes the time before the interview begins and after the cameras are turned off. Any time a reporter is around, what you say or do is liable to be recorded and reported. Stating that something was off the record following a slip of the tongue will not protect you. For anything to be off the record, you and the reporter must agree **beforehand**. If a reporter agrees to go off the record, all that means is that he/she won't quote you as the source for information. It doesn't mean the information won't be used or pursued.

Supposedly off the record comments are generally controversial, embarrassing, or contain information you don't want made public—the juiciest stuff. The reporter will most likely take your off-the-record comments and dig for more information that can be verified through other sources. It is highly likely that you will eventually be exposed as the basis for that information, especially if it is some type of privileged information.

When an interview takes place in your work area, put papers away that you don't want the media to see. Many reporters have taught themselves to read upside-down print. In a studio or when a camera crew is at your office, assume that all cameras and all microphones are on at all times: They probably are. Be sure everyone on staff knows this.

### What Camera?

Ignore the cameras. The best way to convince an audience that you are responsive to the interviewer's questions is to look at that person, not the camera.

### Worries About Accuracy

Because many issues around weather-related news reporting are complex, you may occasionally be concerned about an article or broadcast's accuracy. The use of fact sheets, handout material and news releases can help ensure accuracy by providing reporters with written reference material to which they can refer while finalizing their news

reports. If you still have concerns about accuracy despite providing these materials, stress to the reporter that he/she should call you without hesitation to verify statements, conditions, situations, etc. Since they are as concerned about accuracy as you are, they will call you to help clarify difficult parts of their articles/broadcasts.

However, **NEVER** ask a reporter to let you read an article before it goes to print. The answer will be no, and you will have alienated the reporter - and probably the editor - because you've just indicated you have no faith in their ability to be accurate.

### Conclusions

Although we've focused on media relations skills throughout this guideline, there are many other avenues to communicate with your constituents. You can speak to civic organizations, schools, colleges and business groups. You can set up displays at local airports, shopping malls, fairs and conventions as appropriate or volunteer at community events. You might also host open houses at your facility.

Many of you already use media relations skills to communicate effectively with the media. Consider this media guide as an aid. Should you have questions or need assistance in preparing for media interviews, contact your Public Affairs Officer, who can help you prepare for and make effective communication decisions.

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## NWS General Talking Points

- The National Weather Service issues warnings and forecasts that assist in protecting lives and property and enhance the national economy.
- Weather services cost each American about \$4 a year. That's about the same price as a hamburger, french fries and a shake.
- The National Weather Service is the primary source of weather data for this country.
- The National Weather Service is the sole **OFFICIAL** voice for issuing warnings during life-threatening weather situations.
- The National Weather Service relies on its partners in emergency management and the media to help get out severe warnings and keep communities safe.
- A modernized, streamlined weather service is good government. The modernized weather service supports NOAA's commitment to creating a government that works better and costs less.
- Today's weather services uses sophisticated technologies such as weather satellites, Doppler radar, automated surface observing systems, sophisticated computer mod-

els, and high-speed communications systems and a highly trained and skilled workforce, to generate data, outlooks, forecasts and warnings.

- The National Weather Service's \$4.5 billion modernization is resulting in more accurate forecasts and warnings. For example, we have doubled the warning lead-time for tornados from approximately 5-10 minutes over the last five years. These extra minutes can potentially save lives.
- Warnings don't mean anything if they aren't received by those in harms way. Be prepared and listen to NOAA Weather Radio. The newest models of NOAA Weather Radio can sound an alert for the county in which you live even if you are asleep!
- Each year, the National Weather Service issues more than 734,000 forecasts (fire weather, public, aviation, marine) and 850,000 river and flood forecasts.
- Each year, the National Weather Service issues between 5,000 and 50,000 potentially life-saving severe weather warnings.
- Today's 3- to 4-day forecast is as accurate as the 2-day forecast was 15 years ago. We're working to make the 6- to 10-day forecast as accurate as the forecast for tomorrow.

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## Tips for Television Success

### Non-Verbal

- Smile and be animated when appropriate.
- Use gestures, but don't block the camera.
- Maintain eye contact with the reporter or camera.
- Don't watch yourself on a monitor—it's distracting.
- Avoid licking your lips, squinting, rolling your eyes and excessive blinking.

### Verbal

- Communicate to the person in the living room.
- Communicate with energy.
- Be polite.
- Keep sentences brief. Think sound "bites."
- Avoid "uh," "um" and "OK."
- Avoid jargon and acronyms.
- Speak distinctly in your normal volume and be sure to vary pitch and pace.

### Posture

- Sit up straight, don't lean or swivel.
- Sit on your jacket.
- Keep your feet flat on the ground or cross your legs.
- Don't use the armrest.
- Don't tilt your head—it communicates uncertainty.

### Appearance

- Avoid three-piece suits and large, shiny jewelry.
- Wear solid colors, except black.
- Take off glasses if practical.
- Avoid intricate patterns or contrasting colors.
- Keep hair out of your eyes and face.
- Wear tie with strong color.
- Be clean shaven or make sure facial hair is trimmed.
- Wear a jacket and long sleeves.
- Wear a pale blue or striped shirt.

### Environment

- Review notes and talking points before arriving.
- Have water on hand.
- Make sure the backdrop is suitable or suits you if it's in their studio.
- Be prepared for them to want background shots of you in your work environment.

### Remotes (With an Earpiece)

- Don't touch the ear piece unless it falls out; test audio levels before starting.
- Ask the producer where you should keep your eyes.
- Ask the reporter to tell you when you're "off the air."

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## Tips for Radio Success

### Speaking Tips

- Reporters typically want short soundbites.
- Describe the topic so the "listener" can envision it.
- Speak slowly and enunciate clearly.
- Connect with listeners in their car or home.
- Assume you are being recorded.
- Don't let silence intimidate you — feel free to pause
- Avoid "uh"s and "um"s.
- Have your talking points nearby. Since you're not on camera you can refer to them throughout the interview.
- To highlight a point say: "This is really important . . ."

## The Environment

- Avoid background noise when doing a radio interview in person or via telephone.
- Sit up straight or even stand up. It energizes your speech.
- Behave as if you were on camera; it will help you stay animated and energetic.

## Television and Radio Appearances With Other Guests

- Don't let other guests hijack the agenda.
- Disagree firmly but politely.
- Don't get into a heated discussion on the air. Remember the listener.
- Speak directly to the other guests rather than through the host.
- Affirm positive questions: "I'm glad you asked that..." or "that's a good question...."

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## Tips for Print Success

- Come prepared with more background and detail for a print interview.
- Find a location where you won't be interrupted when talking to the reporter.
- Never take the call cold. Arrange a time for you or the reporter to call back so you can get your thoughts together.
- Make sure you have your messages/talking points handy.
- If it's a phone interview, don't use the speaker phone. It sounds like you're in a tunnel.
- Stand up to talk on the phone.
- Explain complex information in *simple* language; think quotable bits.
- Be sure to ask if they understood your answer or would like you to clarify.
- Listen carefully to the question.
- In a face-to-face interview, don't let your guard down.
- Keep the reader in mind instead of focusing on the reporter. The reporter may know more than the reader.
- Assess the appropriate level of the reporter and publication and talk to that level. For example, you can be more technical with *Science Magazine* than *Reader's Digest*.

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## Promoting the NOAA Corporate ID

As an NWS employee, you are part of a large family. When you serve as a spokesperson or conduct outreach in your community, you not only represent the NWS but also the NOAA and the Department of Commerce.

By reinforcing your corporate ID whenever you conduct media interviews and public outreach, you can help educate the public about who we are and the important work that we do. The NWS receives its funding through NOAA. An informed public can help influence the budget process and assure that we have the funding necessary to accomplish our mission of protecting life and property and the enhancement of the national economy.

The Office of Public Affairs has received informal feedback through conversations, letters and phone calls that tells us that many members of the public (including media and legislators) do not understand what it is that makes the NWS different from the TV weathercasters that they view on the evening news. In addition, the public often confuses our role with that of the commercial weather sector. Again, reinforcing your corporate ID can help better educate our customers about the important work that we do.

Following are several techniques that can help you establish your corporate ID:

- When conducting media interviews in your office, get a NOAA logo into the shot. If you are using a computer screen in the TV shot, see if the NOAA logo can be brought up on the screen. Hang a NOAA logo on the wall and include that image in the television shot.
- When asked to ID yourself for a news story, give your title as a NOAA or National Weather Service meteorologist or hydrologist (or whatever your title may be).
- Emphasize that NWS is the primary source of weather data for this country. When discussing a weather event, talk about what the NWS radars detected and what the NOAA satellite pictures revealed about the storm.



## Attachment A—Update on OM's WSOM Chapters

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|---|---|
| <p>B-16 <b>Marine Reporting Station</b><br/>To be updated in 1999.</p> <p>B-19 <b>Fire Weather Stations</b><br/>Will be updated and consolidated with D-06 in 1999.</p> <p>B-30 <b>Voluntary Observing Ship Program</b><br/>Due in 1999.</p> <p>B-55 <b>Distribution and Use of Satellite Data</b><br/>Requires a total update; earliest draft 1999.</p> <p>B-90 <b>Special Warning Program Observations</b><br/>To be updated in 1999.</p> <p>C-11 <b>Zone and Local Forecasts (main section)</b><br/>To be updated in 1999.</p> <p>C-11 <b>Zone and Local Forecasts, Appendix A (Zone Forecast Maps)</b><br/>Update expected January 1999.</p> <p>C-40 <b>Severe Local Storm Watches, Warnings and Statements</b><br/>OML issued April 1998 to introduce standard bullet format for short-fuse warnings. New OML may modify Severe Weather Statement so UGC codes of SVSs are linked directly with the UGCs in short-fuse warnings, providing updated information. The OML also would allow WFOs to add a phrase in severe thunderstorm warning product headers identifying hail size or thunderstorm wind gusts.</p> <p>C-41 <b>Tropical Cyclone Program</b><br/>Page changes sent June 1998.</p> <p>C-42 <b>Combined Winter Storm and Non Precip Hazards</b></p> <p>C-44 <b>OML under development. Due in 1999.</b></p> <p>C-43 <b>Coastal Flood Program</b><br/>Due in 1999.</p> <p>C-45 <b>Meteorological Discussions and Forecast Coordination</b><br/>An OML to C-45 defining the state liaison office policy is being drafted for field review in 1999.</p> <p>C-47 <b>County Warning Areas, Appendix A</b><br/>Page changes to be issued early 1999.</p> <p>C-49 <b>Warning Coordination and Hazard Awareness</b><br/>Review and update began in early June 1997. Still in OM for review. First draft will not reach field until 1999.</p> <p>C-60 <b>Radio/TV Dissemination;</b></p> <p>C-61 <b>Telephone Dissemination;</b></p> <p>C-62 <b>Newspaper Dissemination;</b><br/>Will begin updating and probably consolidating in 1999.</p> <p>C-63 <b>NOAA Weather Wire Service (NWWS)</b><br/>Update due 2000.</p> <p>C-64 <b>NOAA Weather Radio Program</b><br/>Chapter effective December 21, 1998.</p> <p>C-66 <b>Dissemination of Public Warnings</b><br/>Will consolidate into chapter C-49 in 1999.</p> <p>C-67 <b>News Wire Dissemination</b><br/>Will begin updating and probably consolidating in 1999.</p> <p>C-72 <b>National Watch/Warning Verification Program;</b></p> <p>C-73 <b>Public/Aviation Forecast Verification</b><br/>These chapters will be updated and consolidated into a single chapter, C-75. Reviewed by Regions as of November 1998 and expected to be issued mid-winter 1999.</p> <p>D-06 <b>Fire Weather Services</b><br/>Will be updated in 1999 and consolidated with B-19, D-06, OML: Duties of IR Mets Requiring Exposure to Hazardous Situations.</p> | <p>D-07 <b>Marine Weather Services</b><br/>To be updated in 1999.</p> <p>D-20 <b>Aviation Area Forecasts</b><br/>OML effective November 5, 1998. Will begin updating chapter possibly combining with D-35 in 1999. Backup and new VOR chart in progress. WMO headers/AFOS PILs for new areas (February 1999).</p> <p>D-22 <b>Domestic SIGMET</b><br/>OML effective November 5, 1998. Currently working on updating chapter combining D-22 and D-38 (January 1999). Backup and new VOR chart in progress.</p> <p>D-23 <b>Special Aviation Forecasts and Events</b></p> <p>D-24 <b>Wind and Temperature Aloft Forecasts</b><br/>Currently working on updating chapter. Due January 1999.</p> <p>D-25 <b>Air Traffic Operations Support</b><br/>Pen and ink changes due after coordination with FMH-12.</p> <p>D-30 <b>Transcribed Weather Broadcast Text Products</b><br/>OML effective Nov. 5, 1998.</p> <p>D-31 <b>Aviation Terminal Forecasts</b><br/>Page changes effective Nov. 5, 1998.</p> <p>D-35 <b>International Area Forecasts</b><br/>Should be combined with D-24; timing to be determined.</p> <p>D-36 <b>International/Aviation Service Arrangements</b><br/>Should be combined with D-24; timing to be determined.</p> <p>D-38 <b>International SIGMET</b><br/>Currently working on updating chapter combining D-22 and D-38 (January 1999).</p> <p>D-51 <b>Marine Services for Coastal, Offshore and High Seas, Appendix B</b><br/>Changes effective Dec. 1, 1998.</p> <p>D-52 <b>Marine Services for the Great Lakes</b><br/>OML effective Dec. 1, 1998.</p> <p>D-80 <b>Familiarization Flights</b><br/>Chapter in review.</p> <p>D-82 <b>Training Program for Pilot Weather Briefers</b><br/>Initial draft sent to Regions and Aviation Program at WSH for comment on Oct. 22, 1998. Due spring 1999.</p> <p>D-90 <b>Support for Accident Investigation and Litigation</b><br/>Transmittal Memo issued July 15, 1997, #97-8.</p> <p>D-91 <b>Aviation Liaison and User Support Program</b><br/>Preliminary work to update, adjust, and reassign the contents of these chapters has been completed. Awaiting resources to complete the job.</p> <p>F-42 <b><u>Storm Data</u> and Related Reports</b><br/>An OML has been released to accommodate changes associated with Paradox II the new <u>Storm Data</u> software. Other minor changes also have been included.</p> <p>F-60 <b>Tsunami Warning Service</b><br/>OML issued effective April 1998.</p> <p>F-61 <b>Earthquake Reporting Program</b><br/>Chapter issued March 6, 1996.</p> <p>J-02 <b>Significant Hydrometeorological Events, Post-Storm Data Acquisition, and Service Assessments</b><br/>Chapter issued Sept. 28, 1998.</p> <p>J-08 <b>Nuclear Emergency Response</b><br/>Chapter update 1999.</p> |
|---|---|



## Attachment B-WCM/SOO Roster

WCM	SOO	Location	Telephone
<b>NWS Headquarters</b>			
Rainer Dombrowsky, National WCM Program Manager			301-713-0090 x116
Eli Jacks, National SOO Program Manager			301-713-1970 x188

### Eastern Region

<b>Rick Watling, Regional (Focal) WCM Program Manager</b>			<b>516-244-0123</b>
<b>Kenneth Johnson, Regional SOO Program Manager</b>			<b>516-244-0136</b>
Solomon Summer, HSD Chief			516-244-0111
Dick Westergard	Warren Snyder	Albany, NY	518-435-9568
Barbara Watson	Steve Zubrick	Baltimore, MD/Washington, DC	703-260-0107
Stephan Kuhl	Jeff Waldstreicher	Binghamton, NY	607-770-9531
Glenn Field	James Lee	Boston, MA	508-823-1900
Stan Levine	Ed Mahoney	Buffalo, NY	716-565-0204
Steve Hogan	Paul Sisson	Burlington, VT	802-862-2475
Tom Dunham	Rich Grumm	Central Pennsylvania, PA	814-234-9412
Jerry Harrison	Steven Brueske	Charleston, SC	803-744-3207
Dan Bartholf	Dan Luna	Charleston, WV	304-746-0173
Mary Jo Parker	John DiStefano	Cincinnati, OH	937-383-0031
Larry Gabric	Robert LaPlante	Cleveland, OH	216-265-2370
Steve Naglic	Michael Cammarata	Columbia, SC	803-765-5501
Vince DiCarlo	Larry Lee	Greenville-Spartanburg, SC	864-848-1332
Lora Furgione	Carin Goodall	Morehead City, NC	919-223-5122
Gary Conte	Jeff Tongue	New York City, NY	516-924-0037
Joe Miketta	Alan Cope	Philadelphia, PA	609-261-6600
Rich Kane	Josh Korotky	Pittsburgh, PA	412-262-1591
John Jensenius	Joseph Fred Ronco	Portland, ME	207-688-3216
George Lemons	Kermit Keeter	Raleigh/Durham, NC	919-515-8209
Mike Emlaw	Steve Keighton	Roanoke, VA	540-552-0084
Bill Sammler	Hugh Cobb	Wakefield, VA	757-899-4200
Tom Matheson	Reid Hawkins	Wilmington, NC	910-762-4289

### Southern Region

<b>Gary Woodall, Regional WCM Program Manager</b>			<b>817-978-2812 x106</b>
<b>Bernard Meisner, Regional SOO Program Manager</b>			<b>817-978-2671</b>
Ed May, HSD Chief			817-978-2674
Keith Hayes	Deirdre Kann	Albuquerque, NM	505-243-0702
Douglas Crowley	Richard Wynne	Amarillo, TX	806-335-1121
Barry Gooden	Gary Beeley	Atlanta, GA	770-486-1333
Larry Eblen	Jim Ward	Austin/San Antonio, TX	830-629-0130
Brian Peters	Kevin Pence	Birmingham, AL	205-664-3010
Don Ocker	<i>Vacant</i>	Brownsville, TX	210-504-3354
Terry Huber	Andy Patrick	Corpus Christi, TX	512-289-0959
Jim Stefkovich	Mike Foster	Dallas/Fort Worth, TX	817-429-2631
<i>Vacant</i>	Val MacBlain	El Paso, TX	505-589-4088
Gene Hafele	Steve Allen	Houston/Galveston, TX	281-337-5074
James Butch	<i>Vacant</i>	Jackson, MS	601-936-2189
Fred Johnson	Pat Welsh	Jacksonville, FL	904-741-4370
Howard Waldron	Steve Parker	Knoxville/Tri-Cities, TN	423-586-9040
<i>Vacant</i>	Jack Settlermaier	Key West, FL	
Roger Erickson	Felix Navejar	Lake Charles, LA	318-477-5285
John Robinson	George Wilken	Little Rock, AR	501-834-9102

WCM	SOO	Location	Telephone
Larry Vannozi	Loren Phillips	Lubbock, TX	806-745-4260
Dennis Decker	Dave Sharp	Melbourne, FL	407-255-0212
John White	Jerry Rigdon	Memphis, TN	901-544-0399
Jim Lushine	Jack Gross	Miami, FL	305-229-4522
George Mathews	Brian Francis	Midland/Odessa, TX	915-563-5006
Gary Beeler	Jeff Medlin	Mobile, AL	334-633-6443
Jerry Orchanian	Henry Steigerwalt	Nashville, TN	615-754-8506
Frank Revitte	Mike Koziara	New Orleans/Baton Rouge, LA	504-522-7330
Jim Purpura	Dave Andra	Oklahoma City, OK	405-366-6583
Buddy McIntyre	Greg Jackson	San Angelo, TX	915-944-9445
Rafael Mojica	Shawn Bennett	San Juan, PR	787-253-4586
Bruce Burkman	Ken Falk	Shreveport, LA	318-631-3669
Bob Goree	Irv Watson	Tallahassee, FL	904-942-8999
Walt Zaleski	Charles Paxton	Tampa Bay Area, FL	813-645-2323
Steve Piltz	Steve Amburn	Tulsa, OK	918-832-4115

## Central Region

Joe Sullivan, Regional WCM Program Manager			816-426-3239 x703
Preston Leftwich, Regional SOO Program Manager			816-426-5672
Ken King, Actg. HSD Chief			816-426-3220
Hector Guerrero	Ken Harding	Aberdeen, SD	605-225-5547
Daniel Noah	Viggo Jensen	Bismarck, ND	701-250-4224
Vacant	Vacant	Cheyenne, WY	307-772-2468
Jim Allsopp	Ken Labas	Chicago, IL	815-834-0600
James Meyer	Ray Wolf	Davenport, IA	319-391-6729
Robert Glancy	Eric Thaler	Denver/Boulder, CO	303-361-0661
Jeffrey Johnson	Karl Jungbluth	Des Moines, IA	515-270-4501
Darin Figurskey	Dick Wagenmaker	Detroit, MI	248-625-3309
Jeff Hutton	Steve Hunter	Dodge City, KS	316-227-7140
Carol Christenson	Gary Austin	Duluth, MN	218-729-0651
Jim Belles	Phillip Schumacher	Eastern North Dakota, ND	701-772-0720
Kevin Tynott	Llyle Barker	Goodland, KS	785-899-7119
James Pringle	Michael Meyers	Grand Junction, CO	970-243-7007
Mike Heathfield	Gary Garnet	Grand Rapids, MI	616-956-5922
Jeff Last	Eugene Brusky	Green Bay, WI	920-494-5845
Steve Kisner	Rick Ewald	Hastings, NE	402-462-2127
David Tucek	John Kwiatkowski	Indianapolis, IN	317-856-0361
Shawn Harley	Michael Lewis	Jackson, KY	606-666-4856
Bill Bunting	Peter Browning	Kansas City/Pleasant Hill, MO	816-540-5147
Todd Shea	Dan Baumgardt	LaCrosse, WI	608-784-8275
Rod Palmer	Jeff Hedges	Lincoln, IL	217-732-4029
Norman Reitmeyer	Ted Funk	Louisville, KY	502-969-8842
Jack Pellett	Ed Fenelon	Marquette, MI	906-475-5782
Rusty Kapela	John Eise	Milwaukee/Sullivan, WI	414-297-3243
Todd Krause	Richard Naistat	Minneapolis, MN	612-361-6670
Gene Bowman	Vacant	North Platte, NE	308-532-4936
Brian Hirsch	Bruce Smith	NC Lower Michigan	517-731-3384
Jane Hollingsworth	Julie Adolphson	Northern Indiana	219-834-5178
Brian Smith	Steve Byrd	Omaha, NE	402-359-2394
Ricky Shanklin	Pat Spoden	Paducah, KY	502-744-6440
Tom Magnuson	Paul Wolyn	Pueblo, CO	719-948-9429
Susan Sanders	Brian Klimowski	Rapid City, SD	605-341-9271
Donald Noll	Derek Frey	Riverton, WY	307-857-3898
Todd Heitkamp	Ron Holmes	Sioux Falls, SD	605-330-4247
Steve Runnels	David Gaede	Springfield, MO	417-863-1456
Jim Kramper	Ron Przybylinski	St. Louis, MO	314-447-1876
Mike Akulow	George Phillips	Topeka, KS	785-232-1493
John Ogren	Michael Stewart	Wichita, KS	316-942-8483

WCM	SOO	Location	Telephone
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### Western Region

Tom Ainsworth, Regional WCM Program Manager			801-524-4000
Andy Edman, Regional SOO Program Manager			801-524-5131
Bob Tibi, HSD Chief			801-524-5137
Bert Nelson	Keith Meier	Billings, MT	406-652-0851
Carl Weinbrecht	David Billingsley	Boise, ID	208-334-9860
Tim Dudley	Steve Apfel	Elko, NV	702-738-3018
John Lovegrove	Mel Nordquist	Eureka, CA	707-443-6484
Tyree Wilde	Michael Staudenmaier	Flagstaff, AZ	520-556-9161
Kimberly Bailey	Greg Gust	Glasgow, MT	406-228-2850
Lynn Valtinson	David Bernhardt	Great Falls, MT	406-453-2081
Ron McQueen	Kim Runk	Las Vegas, NV	702-263-9744
Tim McClung	Dave Danielson	Los Angeles, CA	805-988-6610
John Casad	Dennis Gettman	Medford, OR	541-773-1067
Peter Felsch	Tim Barker	Missoula, MT	406-329-4841
Dennis Hull	Jon Mittelstadt	Pendleton, OR	541-276-7832
David Runyun	Doug Green	Phoenix, AZ	602-379-4611
Vern Preston	Dean Hazen	Pocatello/Idaho Falls, ID	208-233-0834
Dan Keeton	Bill Schneider	Portland, OR	503-261-9247
Roger Lamoni	Mary Cairns	Reno, NV	702-673-8107
Vacant	Scott Cunningham	Sacramento, CA	916-979-3041
Dave Toronto	Larry Dunn	Salt Lake City, UT	801-524-5113
Ed Clark	Ivory Small	San Diego, CA	619-297-2107
Charles Morrill	Dr. Warren Blier	San Francisco Bay Area, CA	408-656-1725
Dan Gudgel	Larry Greiss	San Joaquin Valley	209-584-0583
Ted Buehner	Brad Colman	Seattle/Tacoma, WA	206-526-6095
Ken Holmes	Ron Miller	Spokane, WA	509-244-0110
Paul Flatt	David Bright	Tucson, AZ	520-670-5156

### Alaska Region

Greg Matzen, Regional WCM Program Manager			907-271-3507
Gary Hufford, Regional SOO Program Manager			907-271-3886
David Goldstein	Carven Scott	Anchorage	907-266-5117
John Lingaas	Kraig Gilkey	Fairbanks	907-458-3712
Robert Kanan	Carl Dierking	Juneau	907-790-6803
Bruce Turner	(no SOO position)	Palmer (ATWC)	907-745-4212

### Pacific Region

Mike Sierchio, Regional WCM Program Manager			808-532-6413
Thomas Heffner	Paul Jendrowski	Honolulu, HI	808-973-5275
Tom Tarlton		Guam	671-472-7408
Akapo Akapo		Pago Pago (Focal)	684-699-9130

### NCDC: Storm Data/Tropical Prediction Center

Stuart Hinson	NCDC	Asheville, NC	828-271-4437
Max Mayfield	TPC	Miami, FL	305-229-4409





