

Aware

January 2010

Climate, Water, Weather

NWS Makes Reporting Hazardous Weather Easier: New Program To Become Operational

By [Alan Rezek](#), Meteorologist in Charge, WFO Charleston, WV

The National Public Observation Program (NPOP) will enable any caller in the United States, including Alaska, Hawaii, Puerto Rico, the U.S. Virgin Islands, and U.S. Pacific Islands, to relay reports of hazardous weather to NWS forecast offices. NPOP, now in an experimental stage, will become operational at the end of January 2010.

The first phase of NPOP deployment was successfully completed in December 2009, with the installation of NPOP server at the NWS Telecommunications Gateway in Silver Spring, MD. The system will operate 24 hours a day and be monitored by communications specialists in the Telecommunications Gateway.

Anyone in the United States with a touch-tone phone will be able to call a toll free number (877-633-6772) and report hazardous weather events. Weather Forecast Office (WFO) staff can include the toll free number on NWS products to remind users of this new option.

The caller's location will be determined by either a zip code or the actual latitude and longitude, now widely available on global positioning systems (GPS), whichever the caller enters. To provide additional information, the caller will have the option to leave a voice mail. NPOP will send the message directly to the correct local WFO. The report will instantly display on a map in the WFO and local forecasters will receive an alert. After staff confirms the message is valid, it can be instantly relayed to the media and broadcast on NOAA Weather Radio (NWR).

During testing, areas using NPOP noted improvements to the warning service and the flow of hazardous weather information. When the new system was tested at WFO Gray, ME, NWS observed a 30 percent improvement in the accuracy of hazardous weather reports. This increased accuracy is particularly notable in rural areas where it has been difficult to obtain information in the past. Truckers have also expressed interest in NPOP as an easy way to provide real-time reports to NWS when they are on the road but at a safe place to send a text. Since NPOP is an automated system, the improvements have not required additional staff resources.

Every WFO will have the opportunity to take part in the NPOP program. Once operational, it is estimated that most WFOs can become part of the NPOP network during 2010.

NPOP was developed by Ray Young, Lead Forecaster at WFO Charleston, WV, with the support of the NWS Eastern Region Headquarters. *

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Aviation Tips

Find Aviation Weather Tips in *The Front*

By [Melody Magnus](#), Managing Editor, *The Front*

In December, the NWS Aviation Branch released the latest copy of its aviation safety newsletter, [The Front](#). This free resource offers aviation weather tips to pilots of private and commercial planes, balloons and other aircraft. Articles in the latest edition include:

- ◆ Why the NWS Needs Your Pilot Report
- ◆ VFR Flight into IMC Weather: How to Stay Safe Out There
- ◆ Aircraft Icing: Ways to Avoid the Big Chill

If you would like an email notice when [The Front](#) is released, write the editor, [Melody Magnus](#). If you have suggestions or comments on the content, contact [Michael Graf](#). ✱



Climate Update

What Does the Copenhagen-15 Climate Summit Mean for Your Home Town?

By [Ron Gird](#), NWS Outreach Manager

The Copenhagen-15 Climate Summit is now history and time will determine the overall assessment of this 2-week meeting of scientists, government leaders and administrators. It is a challenge to develop new public policy involving science, technology, natural resources and human populations. The term, “Think Globally, Act Locally” applies more than ever. This article will briefly summarize local climate change impacts, NWS climate resources and community partnerships.

The U.S. Global Change Research Program recently published a booklet entitled [Global Climate Change Impacts in the United States](#). The booklet highlights 10 key findings and offers examples of each. Here are two of the findings:

- ◆ Climate changes are underway in the United States and are projected to continue. Rising temperatures and changing precipitation patterns are detailed.
- ◆ Widespread climate-related impacts are occurring now and are expected to increase. Energy supply and use, transportation, society and ecosystems are detailed.

[NOAA's Climate Office](#) is committed to helping government, businesses, and the public adapt to changing climate conditions and reduce the threat of climate change. NOAA climate services include:

- ◆ Research
- ◆ Observing, Monitoring and Data Stewardship
- ◆ Modeling, Prediction and Projections

Aware

NOAA's
National Weather Service
Office of Climate, Water
and Weather Services

OCWWS Director
Dave Caldwell

Acting Branch Chief
Jason Tuell

Managing Editor
Melody Magnus
Melody.Magnus@noaa.gov

Editors
Darcey Dodd
Art Kraus

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- ◆ Assessments
- ◆ Capacity-Building, Outreach, Delivery and Training
- ◆ Climate Literacy

NWS climate services ranges from global to local scales. The NWS National Centers for Environmental Prediction (NCEP) in Camp Springs, MD, operates the [Climate Prediction Center](#), which tracks climate worldwide and produces products for the entire United States, such as the 6-10 Day Outlook, the 1- and 3-month Outlook products, the U.S. Drought Assessment and a Climate Glossary.

Locally, NWS has 122 Weather Forecast Offices, each of which has a Climate Services Focal Point, and 13 River Forecast Centers.

This NWS team provides local climate products such as the 3-month temperature outlook, and conducts outreach and education, such as visits to schools and community groups. NWS operates the [Cooperative Observer Program](#) with more than 10,000 volunteers taking daily climate measurements. These volunteers take observations on farms, in urban and suburban locations, national parks, seashores and mountaintops, wherever people work and play.

Communicating climate change information to the public requires partnerships within the local community. Local TV meteorologists and NWS scientists provide climate information via the Earth Gauge Program. The Earth Gauge Program is run by the [National Environmental Education Foundation](#). Weekly Climate Factoids are provided to local meteorologists participating in the program. The factoids can be seen on local TV weathercasts as well as community presentations by local NWS staff.

The [U.S. Environmental Protection Agency](#) (EPA) has a handout entitled, Global Warming- What's Your Score? Here's an excerpt from the handout: "In the United States, a typical household of two people generates approximately 41,500 pounds of carbon dioxide emissions annually from household activities and personal transportation." Finally, you can find publications on [climate change topics](#) on the NWS website.*



Clean energy from wind is just one of many options being used to reduce our impact on global climate change.

Dissemination News

EMWIN Resource Source Code Now Online

By [William Johnson](#), NWS Office of the Chief Information Officer

The Emergency Managers Weather Information Network (EMWIN) team is pleased to announce the EMWIN-R prototype receiver source code and hardware design are now available on the [GOES-R Website](#). The prototype provides backward compatibility to the current generation broadcast to ensure a flexible transition.

In the GOES-R era, the EMWIN broadcast data rate will greatly increase, allowing for a much larger product set. In addition, the receiver is also capable of receiving the current Low Rate Information Transmission (LRIT). We believe manufacturers will find the code and documents useful to their design efforts. This design was successfully demonstrated at the NOAA 6th GOES Users'



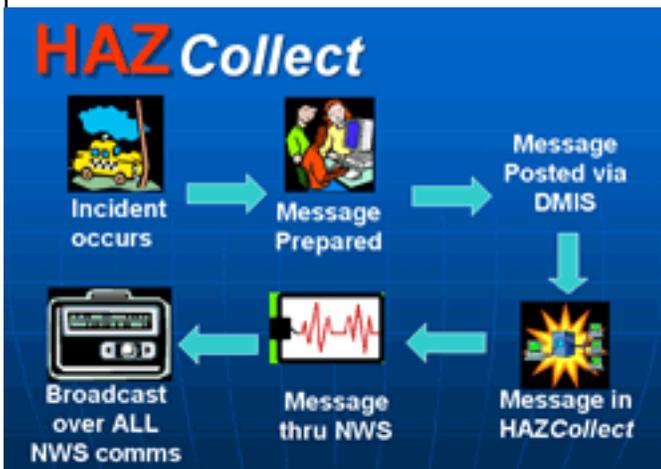
Conference, held November 3-5, 2009, in Madison WI. The demonstration took place using data received from the GOES 14 satellite, which continues to broadcast EMWIN.

EMWIN-N Transition Moves Forward

The EMWIN transition is drawing nearer. All users should begin migrating to EMWIN-N capable systems. Although subject to change, the plan is for GOES 13 to replace GOES 12 (East) in April/May 2010, and GOES 14 to replace GOES 11 (West) in December 2011. The transition could occur earlier due to premature failure of one or both of the current GOES satellites. To keep informed of new developments in the EMWIN transition, please visit the NWS [EMWIN website](#). *

Reminder: HazCollect Service is Operational—Register Now!

By [Herb White](#), NWS Dissemination Services Manager



The NWS HazCollect service is available now to all emergency managers and warning officials. HazCollect and FEMA's Disaster Management Interoperability Services (DMIS) are your low-cost entry into Common Alerting Protocol.

What are the steps to prepare, sign up and implement? First, go to the [NWS HazCollect Website](#), then select "For Government."

HazCollect is a public warning service for preapproved and authenticated officials at the federal, state and local levels. You can use HazCollect to broadcast non-weather emergency messages over NWS systems. Dissemination includes NOAA Weather Wire Service, EMWIN, NOAAPORT and NWR for relay to the Emergency Alert System (EAS). *

Flooding/Hydrology

Grants Help Pay for Turn Around Don't Drown Signs

By [Larry Wenzel](#), National Hydrologic Outreach Program Leader



Would you like to install Turn Around Don't Drown (TADD) warning signs but need funding? Tim Troutman, WCM at NWS Morristown, TN, uncovered a great grant program that emergency managers (EM) can take advantage of. The grants are awarded through the generosity of State Farm Insurance Company and Walmart. While NWS, as a government agency, is not allowed to apply for these grants directly, staff can alert EM officials of these opportunities.

"I first tried this with the emergency management agencies (EMAs) in Lincoln County, TN," said Tim. "Through successful grant applications with State Farm and Walmart, Lincoln County EMAs purchased 50 Turn Around Don't Drown signs that were posted at 25 locations. It proved to be a great project that resulted in positive publicity for the state and local EMAs and NWS. This effort will undoubtedly lead to mitigating the loss of life and property in flood-prone areas."

Information on the State Farm funds, entitled [Safe Neighbors Grant](#), is available online. Applicants must request the grant application from their regional State Farm center, which for Tennessee is located in Murfreesboro. The application is 3 pages long and is fairly easy to complete.

Walmart also offers community grants through its local stores, including Sam's Club. EMs and other local officials can pick up this easy 2-page community grant application form from Walmart's customer service department. ❄

Prepare for Flooding with Safety Awareness Week: March 15-19

By [Larry Wenzel](#), National Hydrologic Outreach Program Leader

Will the Red River of the North flood again? Will the Deep South experience heavy rain like it did this past fall? Will Alaska have heavier than normal snowfall, followed by rapid snowmelt and ice jams? It remains to be seen. Regardless, Flood Safety Awareness Week is an opportunity to heighten the public's awareness of flood hazards and allows them to prepare for the next flood.

NWS has scheduled March 15-19 as its annual Flood Safety Awareness Week. Floods and flash floods take no holiday. Nearly every day of the year, it floods somewhere in the U.S. The goal of Flood Safety Awareness Week is to educate the public of the hazards of floods and flash floods.

Each day of National Flood Safety Awareness Week will focus on a different flood and flash flood element. A one-stop [Flood Safety Website](#) provides a wide selection of educational materials, including video clips, public service announcements, safety brochures, and artwork for posters. ❄



Residents pile sand bags to keep back the water during heavy flooding in Midwest.

High Water Mark Signs Keep Residents Aware of Flood Dangers in Wisconsin and Iowa

By [Brian Hahn](#), Service Hydrologist, NWS Milwaukee, WI

In June 2008, much of the Midwest was impacted with record-breaking floods. The High Water Mark sign program serves as a visual reminder to residents of the need to stay vigilant and prepared for the next major flooding episode.

So far, 19 High Water Mark signs have been posted in southern Wisconsin and northeast Iowa. To determine which sites would get signs, NWS coordinated with the local U.S. Geological Survey office to find out which of its gauges had a record flood during the June 2008 event and which sites would be suitable to display a sign.

Signs were also placed near NWS river gauges that experienced record floods during the event. Brian Hahn coordinated with the Jefferson County, WI, Emergency Manager about putting two signs on public buildings in the towns of Jefferson and Ft. Atkinson. Also, the Reedsburg,



Signs like the one above are posted at a frequently visited location near a flood site to increase awareness about flood risk.

WI, City Engineer wanted a sign for the local wastewater plant, an NWS cooperative weather station. The NWS equipment at the plant was washed away by the flood.

The signs take time to arrange but are a really effective outreach tool. Hahn's contact in La Valle, WI, inquired about getting two more signs for La Valle in addition to the one he was given. Information about how to obtain [High Water Signs](#), where signs are posted, and more is available online. *

Hurricane Awareness

National Hurricane Center to Increase Lead Time for Watches and Warnings

By [Daniel Brown](#), [Dennis Feltgen](#) and [James Franklin](#), National Hurricane Center, Miami, FL

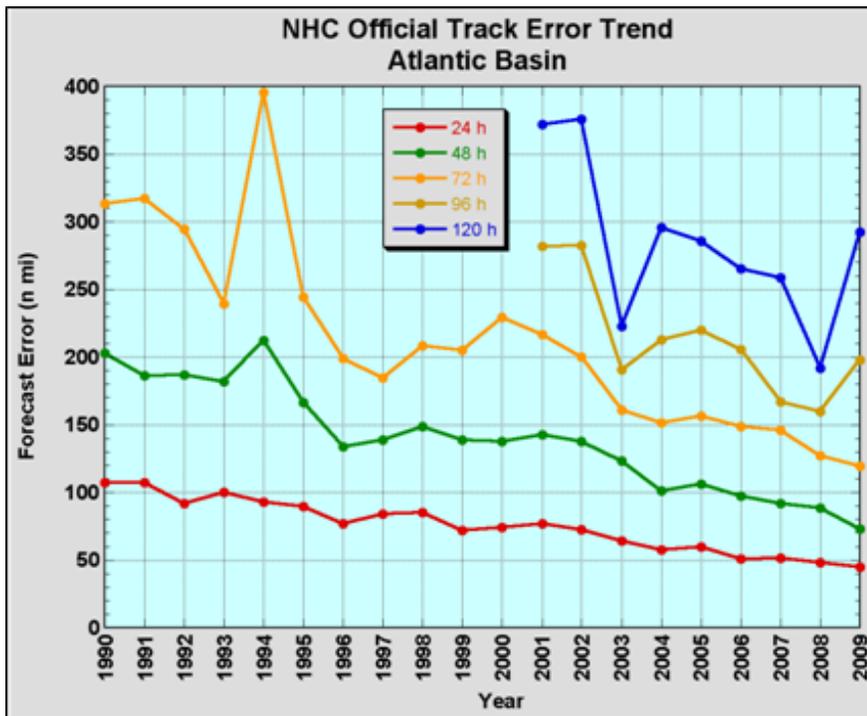


Figure 1. NHC Average Track Errors, in nautical miles, since 1990.

The NWS National Hurricane Center (NHC) will provide greater lead time for tropical cyclone watches and warnings beginning with the 2010 hurricane season.

With the ever-growing population along the U.S. coastline, emergency managers need more lead time to prepare their communities for tropical cyclones. In response, NHC will issue tropical storm and hurricane watches and warnings for threatened coastal areas 12 hours earlier than in previous years.

Tropical storm watches will be issued when tropical storm conditions are possible along the coast within 48 hours. Tropical storm warnings will be issued when those conditions are expected within 36 hours.

Similar increases in lead time will apply to hurricane watches and warnings. The hurricane watches and warnings will generally be timed to provide 48 and 36 hour notice, respectively, before the onset of tropical-storm-force winds, a threshold

that typically forces a suspension of many hurricane preparedness activities. Detailed below are the new tropical storm and hurricane watch/warning definitions.

New Definitions of Tropical Storms and Hurricane Watches and Warnings

- ◆ **Tropical Storm Watch** means that tropical storm conditions are *possible* somewhere within the watch area within the next 48 hours.
- ◆ **Tropical Storm Warning** means that tropical storm conditions are *expected* somewhere within the warning area within the next 36 hours.

- ◆ **Hurricane Watch** means that hurricane conditions are *possible* somewhere within the watch area. A watch is typically issued 48 hours before the anticipated first occurrence of tropical-storm-force winds. Such winds make preparing outside areas difficult or dangerous.
- ◆ **Hurricane Warning** means that hurricane conditions are *expected* somewhere within the warning area. A warning is typically issued 36 hours before the anticipated first occurrence of tropical-storm-force winds. Such winds make preparing outside areas difficult or dangerous.

Advances in observational capabilities, numerical weather prediction, and forecaster tools over the past 2 decades have enabled NHC staff to make more accurate track forecasts, thus allowing the extension of watch and warning lead times. Over the past 15 years, the average NHC forecast track error has been cut in half (see Figure 1). The average 2-day (48 hour) forecast error rate has been reduced from about 200 nautical miles in 1990 to well below 100 nautical miles in 2009.

NHC Director Bill Read commented, “The change in lead time in the watches and warnings brings us more in line with the lead time needed by emergency managers.” The NWS Central Pacific Hurricane Center in Honolulu instituted the change in 2009. ✱

Outreach Innovations

NWS Southern Region Director Bill Proenza Recognized For Commitment to EM Community

By [Ron Trumbla](#), South Region Public Affairs Officer

NWS Southern Region Director Bill Proenza received the International Association of Emergency Managers (IAEM) prestigious Career Excellence Award at the 2009 IAEM Conference in Orlando, FL, last fall.

During his last 10 years as Regional Director of NWS Southern Region, headquartered in Fort Worth, TX, Proenza has made developing and strengthening relationships and improving service to local, state, national and international emergency managers among his top priorities.

IAEM-USA Region IV President Dan Maher said, “For years, Bill has been a tremendous ally to the emergency management community by cultivating a positive working relationship coupled with his progressive mindedness. Bill always has a “can-do” attitude and his professionalism sets an example for everyone.”

Alabama Emergency Management Agency Field Coordinator Dan Isley concurred. “His support for what he calls his ‘customers’ [county emergency management agencies] has been underlying throughout the years of my association with him, dating back to the late 1990s. Bill is truly a professional in every sense of the word. His career has been one of true excellence.”

In his capacity of Regional Director of NWS Southern Region, Proenza supervises nearly 1000 meteorologists, hydrologists, scientists and technicians in offices throughout the South. ✱



NWS Southern Region Director Bill Proenza received the International Association of Emergency Managers prestigious Career Excellence Award

Regional Weather Conference Blends Science and Excitement

By [Glenn Field](#), WCM, NWS Taunton, MA

The annual Southern New England Weather Conference offered a twist on regional meetings. The event, conducted last fall by NWS Taunton, MA, in conjunction with the Blue Hill Observatory Science Center and the AMS Chapter of the University of Massachusetts at Lowell, drew more than 200 attendees plus hundreds of parents and students to the concurrent Weatherfest activities that included weigh yourself on Mars, rocketry, kite flying, and more.

What made this conference special was top-notch speakers covering a wide variety of topics, who speak in formal, yet relaxed settings. A teacher may sit next to a television meteorologist, which creates a new dynamic for interaction. “It is an example that hopefully other regions will follow—with the collection of private and public sector meteorologists and academia,” said Bob Hart, a Professor of Tropical Meteorology at Florida State University.

In 2009, the conference drew a wide variety of attendees including construction workers and nurses who happened to hear about it on NWR. To present to this diverse crowd, speakers need the right mix of detailed scientific data versus general information. The topics must be relevant to New England residents and include recent weather events.

There’s always entertainment, too. The morning started out with a forecasting contest called Breakfast with Hayden Frank from NWS Taunton. Also, a television meteorologist panel discussion was held in which panelists answered questions from the audience. The

after dinner keynote speaker was Reed Timmer, a world-renowned extreme storm chaser from The Discovery Channel. He drove his wind and hail resistant armored Dominator vehicle to the conference for attendees to see. The conference ended with rip-roaring laughter and a standing ovation when WCM Glenn Field and CBS Meteorologist Nick Morganelli presented a video spoof entitled Our Weather Heroes. Several New England television meteorologists dressed up as superheroes, including HydrometeorMan, Cat6 Woman, Vortex Victor and more. With the help of NWS forecasters, the super heroes were summoned into action to prevent impending disasters from occurring. Plans for the next Southern New England Weather Conference are already underway. ❄



From left, Storm Chasers Reed Timmer and Chris Chittick in front of their “Dominator” extreme tornado chase vehicle as seen on The Discovery Channel.

Severe Weather

Public Product Suite Enhanced with New Nighttime Severe Weather Outlook

By [David Imy](#), Operations Branch Chief, and [Greg Carbin](#), WCM, SPC, Norman, OK

Cool-season nighttime tornadoes are a greater public safety concern because many people do not expect tornado outbreaks in the winter and do not tune into alert systems for nighttime watches and warnings.

The most common area in the United States for winter tornado activity is along the Gulf Coast. NWS has observed an increase in tornadic activity during previous cool-season El Niño cycles. El Niño can accentuate winter tornado potential across the far southern United States due to strong environmental wind fields and shear. This effect may be especially true over Florida, where significant killer nighttime tornado events occurred in February 1998 and in February 2007. These two tornado episodes, alone, resulted in 63 fatalities, all occurring after midnight.

Last fall, in an effort to enhance the public's awareness ahead of dangerous nighttime tornado events, the Storm Prediction Center (SPC) and NWS Forecast Office staff in Florida discussed possible text products to use for these low-probability/high-impact events. The team decided the SPC Public Severe Weather Outlook (PWO) would be the best public product to warn residents about the risk of strong to violent nighttime tornadoes in the winter.

This winter, on a test basis, the PWO will be issued immediately after the 2000 UTC and/or 0100 UTC Day-1 Convective Outlooks whenever a 10 percent or greater probability of significant tornadoes is forecast after dark. Before this change, the PWO was only issued for high and moderate risk outlooks, driven by greater probabilities, regardless of the time of day. The lower PWO issuance criteria during the cool season should make residents more aware of an increased risk when they may not be expecting a widespread tornado outbreak.

NWS will evaluate this test product at the end of March and then decide whether to adopt this change permanently. ❄



Tornado near Mayfield, OK, May 16, 1977

Web Page Details New Hail Criteria

By [John T. Ferree](#), NWS Fire and Public Weather Services Branch

As of January 5, 2010, NWS changed its minimum hail size criterion for Severe Thunderstorm Warning (SVR) and Severe Weather Statement (SVS) products from 3/4 inch (penny sized) diameter or larger hail to 1 inch (quarter sized) diameter or larger hail.

The change was announced in a [Service Change Notice](#) in December. To respond to user questions and comments from the experimental period, NWS has developed a [Web page](#) addressing concerns and questions. For further information regarding this change, please contact [John T. Ferree](#). ❄

Planning Underway for the 10th National Severe Weather Workshop

By [John T. Ferree](#), Operations Branch Chief, and [Greg Carbin](#), WCM, SPC, Norman, OK

Mark your calendar for the 10th National Severe Weather Workshop in Norman, OK, March 4-6. This year's workshop theme is: *Remembering Our Past to Build a Safer Future*. This will mark the 10th anniversary of the workshop and a retrospective of past workshops is part of the theme.

The workshop planning committee has established four broad topic areas that will guide the development of the 3-day agenda:

- ◆ Mitigation Strategies and Continuity of Operations
- ◆ Weather Technologies to Aid Decision Making
 - ◆ Verification Metrics and Meanings
 - ◆ Event Alerting Technologies and Issues



The trade show at the National Severe Weather Workshop draws a big crowd of interested attendees.

Other topics of interest to workshop participants will range from an update and status of the Enhanced Fujita scale for tornado damage assessment to the use of social media in emergencies.

In addition to presentations and a possible poster session, workshop organizers are planning to have panel discussions and breakouts related to the prior listed topics. As is the case every year, the workshop will conclude on Saturday afternoon with a session for storm spotters, emergency managers, and others who help protect their communities from severe storms.

Concurrent with the March 2010, event, the Workshop's Trade and Technology Expo will feature leading and innovative companies providing services in emergency response, preparedness and meteorological information.

For more information on the workshop, including logistics, registration and how to reserve a space at the Trade and Technology Expo, check the [2010 NSWW Website](#). *

Service Assessments

Four Service Assessments Look at Major Weather Events

By [Sal Romano](#), Meteorologist, NWS Verification Branch

Service Assessments evaluate NWS performance during significant weather and environmental events. The following is a status of the current active National Service Assessments:

- ◆ **Central United States Flooding of June 2008:** Heavy rains falling over some areas of the Midwest during late May and June 2008 caused historic flooding. The states most affected were Iowa, Illinois, Wisconsin, Missouri and Indiana. Several locations received more than 10 inches of rain during the first 2 weeks of June. The final report is scheduled for release by mid-January.
- ◆ **Mount Redoubt Volcanic Eruptions March-April 2009:** On March 22, 2009, Mount Redoubt Volcano, about 100 miles southwest of Anchorage, AK, began a series of eruptions. Of the six significant eruptions, plume heights at or above 60,000 feet were measured on two occasions. Ashfall amounts west and north of Anchorage ranged from just a trace to a 1/2 inch. The assessment team plans to release this report in February.

◆ **Southeast United States Flooding of September 2009:** Copious moisture drawn north into the southeast United States produced showers and thunderstorms from Friday, September 18, through Monday, September 21, 2009. Rainfall amounts across the region totaled 5 to 7 inches, with locally higher amounts near 20 inches. The northern two-thirds of Georgia and Alabama and southeastern Tennessee were hardest hit as the southeasterly low level winds provided a favorable upslope flow. Flash flooding and areal flooding were widespread with the greatest impacts concluding on Wednesday, September 23, 2009. The assessment team is currently preparing a draft report for review by the end of March.

◆ **Tsunami in the South Pacific Basin on September 29, 2009:** A massive earthquake with an 8.0 magnitude occurred at 1748 UTC (6:48 am Samoa Standard Time) on Tuesday, September 29, 2009, about 125 miles south of the Samoan Islands in the south central Pacific Ocean. Within minutes, this earthquake spawned a tsunami that severely impacted islands in the region, including American Samoa, Western Samoa and Tonga. There were at least 139 reported fatalities on these three islands; including 110 in Western Samoa, 22 in American Samoa, and 7 in Tonga. No significant impacts were noted in Hawaii or on the U.S. West Coast. NWS staff hopes to release this report in May 2010. ✱



Sweetwater Creek at Veterans Memorial Hwy, Austell, GA, September 23, 2009, after waters started to recede from Southeast flooding. Photo courtesy of Melissa Tuttle Carr.

StormReady/TsunamiReady

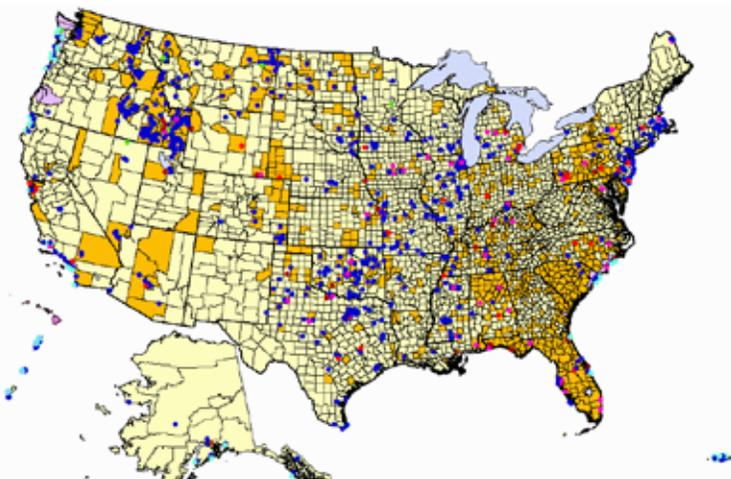
StormReady Program Gains 38 Sites in New Fiscal Year

By [Melody Magnus](#), *Aware Editor*

Since October 1, when the new fiscal year started, the NWS StormReady program gained 38 new sites and renewed many times that number. In addition to new counties and communities in states from Alabama to Wyoming, the program gained four more universities: Auburn University in Alabama, Central Michigan and Ferris State Universities in Michigan and Texas A&M.

The Lockheed Martin facility in California also joined along with the StormReady program's second shopping mall: White Oaks Mall in Springfield, IL.

Bay City, MI, State Recreation Area became StormReady's first state park. Casper/Natrona County International Airport in Wyoming added to a growing list of airports who have become StormReady. The newest military StormReady site is Tyndall Air Force Base in Florida.



StormReady counties are shown in gold. Communities are indicated with colored dots. As of press time, there were 1547 StormReady sites.

The TsunamiReady program also gained two new sites: Manati and Aguadilla, PR.

The StormReady Supporter program, which has fewer requirements, added the National Football League's Green Bay Packers, McKee Foods and Randolph Community College in North Carolina.

To be recognized as StormReady, a community must commit to specific levels of emergency preparedness, including 24/7 communications and an active outreach and education program.

For more information on becoming StormReady or TsunamiReady, contact your local NWS office or go to the [StormReady Website](#). *

TsunamiReady Success at WFO Wilmington, NC: Why and How

By [Steve Pfaff](#), WCM, NWS Wilmington, NC

In late September, WFO Wilmington, NC, recognized Pender County, NC, as TsunamiReady. As a result, all five coastal counties in WFO Wilmington's county warning area are part of NOAA's TsunamiReady Program. This accomplishment makes WFO Wilmington, NC, the first WFO to obtain TsunamiReady recognition for all of its coastal counties. WFO Morehead City, NC, recognized Camp LeJeune Marine Base.

Although the probability of an Atlantic Basin tsunami occurring is low, the effects from a large tsunami would be devastating given the dense population and high level of infrastructure on the U.S. East Coast. The effects would be further compounded if an event occurred in the

summer, when hundreds of thousands of people are visiting coastal communities and beaches. The population in the Wilmington area alone can swell to more than one million people.

Significant tsunamis have occurred in the Atlantic Basin. The worst on record was the result of a devastating earthquake that generated a series of tsunamis impacting Portugal in 1755, reportedly killing tens of thousands of people. Other significant tsunamis have resulted in the deaths of more than 2,000 people in Jamaica in 1692, and over 2,000 people in England in 1607. The most recent destructive tsunami that impacted the Atlantic Basin occurred in 1929, when a magnitude 7.2 earthquake occurred on the Grand Banks in Newfoundland, Canada, that was felt as far away as Ottawa. The resulting tsunami killed 28 people on Newfoundland's Burin Peninsula.

The TsunamiReady Program was designed to help coastal communities, schools, and counties better mitigate the effects of tsunamis and to promote awareness of tsunami dangers.

Specifically, the program focuses on education to develop a better understanding of the tsunami hazard and requires communities to develop a plan to deal with the hazard, implement a notification system, and prepare resident to act in the event a tsunami watch or warning is issued.

Ultimately, TsunamiReady communities are better prepared to deal with the threat of a tsunami. On September 29, 2009, a devastating tsunami struck American Samoa. A school principal on the western coast of the island felt the earthquake and witnessed the ocean retreating from the shoreline. He responded by sending all of the school children up the



Pender County, NC, decided it was the worth the time to become TsunamiReady. From left: Tommy Batson, Pender County Emergency Management; Mike Caropolo, MIC, WFO Wilmington, NC; and Charles Newman, Pender County Emergency Management.

mountainside minutes before a 37-foot wall of water destroyed their school. That principal had received TsunamiReady training and was able to take action that saved the lives of over 100 students.

There are currently 72 counties, communities, and sites in the [TsunamiReady Program](#). If you are interested in being part of the program, contact your [local WCM](#). ❄

McKee Foods Tells Why It Joined StormReady Supporter Program

By [Ed Calinese](#), WCM, NWS Tulsa, OK

McKee Foods recently joined the ranks of corporations that are showing their employees and visitors how serious they take safety. WFO Tulsa, OK, recently recognized the McKee Foods Corporation of Gentry, AR, as a StormReady supporter. McKee Foods is the first corporation in Arkansas recognized as a StormReady supporter.

StormReady gives communities the skills and education needed to survive severe weather, before and during the event. It is a voluntary program that began in eastern Oklahoma and northwest Arkansas in early 1999. State and local emergency management agencies from OK and AR worked with NWS Tulsa to develop StormReady guidelines. StormReady was developed to help emergency managers strengthen their local hazardous weather operations and is intended to ensure the community has the tools necessary to receive and disseminate life-saving NWS warnings throughout the community. Educational activities within the community that focus on the potential impacts of severe weather are also an important aspect of the program to ensure citizens are prepared for a quick response once they receive warning information.

The StormReady supporter program is intended to recognize those entities within a community that promote and practice severe weather awareness and preparedness but cannot meet all the requirement of a StormReady site, such as 24/7 alerting capability. Management and employees of the McKee Foods Corporation have taken a highly proactive stance on severe weather preparedness by:

- ◆ Creating a command center staffed with key personnel whenever severe weather threatens
- ◆ Using numerous avenues to receive warnings directly from NWS and to relay the warnings throughout its facility to employees and visitors
- ◆ Continually monitoring local weather conditions
- ◆ Implementing methods to share hazards information with NWS Tulsa and to communicate directly with Benton County Emergency Management.
- ◆ Using a formal emergency operations plan during severe weather events. ❄



McKee Foods made a corporate commitment to worker safety by becoming a StormReady Supporter: Pictured from left are NWS Tulsa MIC Steve Piltz, NWS Tulsa WCM Ed Calianese, Information Systems Analyst Rex Wren, Information Systems Associate Network Analyst Mike Engelke, Safety Specialist Roger Marrs, Safety Coordinator David Dunham, Vice President Gentry Operations Tim Broughton, County Central Communications Director Matt Garrity, County Emergency Management Director Marshal Watson. Photo by Gentry Courier-Journal Managing Editor Randy Moll.

Winter Weather Update

NWS Expands Cold Advisory for Newborn Livestock Experiment

By [Tanja Fransen](#), WCM, NWS Glasgow, MT



[Cold Advisory for Newborn Livestock](#) has expanded and adapted to better protect newborn livestock.

During the winter of 2008-2009, WFO Glasgow debuted the experimental [Cold Advisory for Newborn Livestock](#) (CANL) system. This program was a Cooperative Program for Operational Meteorology, Education and Training Partners grant project conducted jointly with Dr. Larry Kalkstein at the University of Miami and Dr. Katrina Frank at the University of Delaware.

The system is designed as a decision-support tool for ranchers with newborn livestock less than 24 hours old. It gives them a heads up when weather will impact their operations and time to either move their livestock or be more vigilant with food, water and shelter.

While the CANL system ran well this past winter in northeast Montana, areas to the south and east of Glasgow's county warning area were hit extremely hard by adverse weather conditions, resulting in thousands of newborn livestock deaths and millions of dollars in losses. User feedback also led to a few changes in the system that will begin running again in mid-January 2010.

Four other WFOs also will be part of the project this winter: Aberdeen, SD; Billings, MT; Bismarck, ND; and Great Falls, MT. ❄

Online Winter and Spring Awareness Resources Available

Winter is here and spring is approaching. You can find [windchill](#) and [winter weather](#) season information as well as [severe weather](#) and [flood](#) tips to ensure you are ready. Check out these sites for posters, videos, animations, photos, survivor stories, children's and teachers' resources, policy statements and much more. If you know of additional resources, contact [Melody Magnus](#). ❄

Climate, Water and Weather Links

- [National Weather Service Home Page](#)
- [Aviation Weather, Information and Resources](#)
- [Weather Safety and Awareness Brochures, Booklets, Posters](#)
- [Education and Outreach Videos, Multimedia and More](#)
- [NWS Local Office Key Contact List](#)
- [NOAA Weather Radio All Hazards](#)
- [HazCollect Information](#)
- [Past Weather and Climate from the National Climatic Data Center](#)
- [StormReady Home Page](#)
- [TsunamiReady Home Page](#)
- [Weather Fatality and Injury Statistics](#)