From the Top: Weather-Ready Nation: Forecasting Models to Improve This Fall

Excerpted from NWS Insider

While in State College, PA, for the American Meteorological Society Summer Meeting, NWS Director Dr. Louis Uccellini visited AccuWeather and was interviewed by CEO Barry Myers about changes at NWS this fall. Excerpts from that interview are below.

NOAA's Weather-Ready Nation (WRN) initiative builds community preparedness and resilience to extreme weather, water and climate events. AccuWeather was named one of NOAA's first Weather-Ready Nation Ambassadors. NOAA continues to work with WRN partners such as AccuWeather to make a difference in people’s lives with the Ambassador initiative, which includes the strengthening of critical forecasting models.

This November, following a major NWS computer upgrade, the meteorological community and the public will benefit from improved American forecast models, paving the way for earlier and more accurate forecasts.

The upgrades have increased the computing capacity for NOAA, which will, in turn, increase the resolution of forecast models, said Uccellini.

The Global Forecast System (GFS) will be able to look within a 13-kilometer resolution 10 days in advance of an event. Previously, it was only capable of looking at 27 kilometers 7.5 days in advance. The improved resolution will help bring the model closer to the accuracy of the European model, which accurately predicted the track of Superstorm Sandy in 2012. Catching up to the European model is a challenge which Uccellini considers the goal.

There have also been various improvements to the Weather Research and Forecasting model. “We have what I believe is now the best hurricane model in the world,” Uccellini told Myers. “It certainly proved itself in Arthur. It really proved itself last year in the Western Pacific with those super typhoons to the point where we had countries calling us up to get them the direct information on these storms.”

Since then, the NWS has been holding workshops in Asia and providing the code so that other countries can run the models internally. “We’re feeling very confident about our total model suite,” Uccellini said.

Decision Support: Integrated Weather Team Meeting Focused on Best Practices

By NWS Insider Staff, Silver Spring, MD

NWS Amarillo, TX, in conjunction with local emergency management (EM) and media officials, held an Integrated Weather Team workshop on July 31. Nearly 125 key decision makers from across the area met to discuss how to effectively communicate a consistent message through interactive scenarios, presentations and panels.

The workshop kicked off with two presentations describing the workshop concept and the tools available to access accurate information during hazardous weather. The workshop also featured panel discussions:

Nearly 125 key decision makers from across the Texas and Oklahoma Panhandles met to discuss how to effectively communicate a consistent message through interactive scenarios, presentations and panels.
Keynote speakers included leaders from the EM community, NWS Norman, OK, broadcast media and hospital services, all of whom played key roles during the response effort after the May 2013 Moore, OK, EF-5 tornado. The speakers shared best practices to ensure a consistent message before, during and after a major weather event.

Participants gave the workshop high marks. Pampa, TX, EM Wes Schaffer echoed the need for collaboration and coordination. “As an Emergency Manager in this region, I know that I am not totally alone when making tough weather decisions for my community,” Schaffer said. “NWS events like this workshop help reinforce collaboration by providing candid insight into the perspectives of both our NWS Partners and our local broadcast meteorologists. Additionally, hearing the lessons learned from our neighboring jurisdictions’ disaster will be very valuable when examining my own jurisdiction’s preparedness.”

Outreach Innovation: Drones Help Capture Tornado Track

By Rick Shanklin, WCM, NWS Paducah, KY

On Sunday August 17, 2014, a tornado touched down in Henderson County, KY. This well videoed and photographed EF-1 tornado tore a 2-mile damage path, damaging several homes and structures and causing crop damage. Part of the damage track ran through a mature cornfield, resulting in a textbook convergent damage path; however, this damage pattern could only be fully seen from a bird’s eye view.

The next day, NWS Paducah staff saw an opportunity to get this bird’s eye view when the Evansville-Vanderburgh County, IN, EMA showed video produced by its drone. After some discussion, the EMA Director happily agreed to have the drone fly over the damage path, resulting in some remarkable footage of the cornfield damage.

The August 17 tornado is not the first time NWS Paducah has used drone footage. An EMA shared drone video of the November 17, 2013, EF-3 tornado in Brookport, IL, which yielded vital damage details from the deadly tornado.

Drones offer agility, portability, and the ability to reach areas not readily accessible by foot or land vehicles. In addition, the cost of operating a drone can be considerably less than conventional aircraft. Partnerships with EMs and others can prove vital in providing key information for storm damage surveys.

Outreach Innovation: Partnership Put Two New Spanish–Only NWS Stations Online

By Barry Goldsmith, WCM, NWS Brownsville, TX

Elected officials, state, local and federal government employees, and local English and Spanish language media met at NWS Brownsville/Rio Grande Valley to formally launch the Spanish Language Early Alert/Warning System for residents of the Rio Grande Valley and beyond. The system, which consists of two new NOAA Weather Radio (NWR) transmitters, covers all of the primary Spanish speaking population in the area with tone alerted hazardous weather and non-weather warnings. The two transmitters join those in El Paso, TX, Coachella, CA, and Hialeah, FL, which send Spanish-only broadcasts.

The launch of the Spanish Language Early Alert/Warning System was a collaborative effort. A Hazard Mitigation Grant and local government and private sector contributions of about $125,000 funded the equipment, infrastructure, and human resources to complete the system.
The project won an Innovation Award from the National Association of Development Organizations. At its 2014 Annual Training Conference, the group presented a certificate to the NWS team honoring its efforts to bring weather and other hazardous information into communities where English is not the primary spoken language.

Elected officials, public safety and community leaders, NWS Brownsville/Rio Grande Valley Staff, and Midland Radio Corporation staff spoke at the 45-minute ceremony, which was followed by the official ribbon cutting in front of the NWR console in the office’s operations area.

Forecaster and Spanish Language Program Leader Maria M. Torres and Warning Coordination Meteorologist (WCM) Barry Goldsmith commented, “The time saved by understanding the message without translation could be enough to trigger life-protecting action for some of our most vulnerable residents of the Rio Grande Valley during a fast-moving event.”

Outreach Innovation: Preparedness Challenge in “Quiet” Hurricane Season

By Barry Goldsmith, WCM, NWS Brownsville, TX

For the ninth consecutive year, NWS teamed up with the Insurance Council of Texas and dozens of television, print/web and radio partners to remind residents of the importance of remaining aware and prepared for hurricanes as the peak of the 2014 Atlantic season approached. The team provided live and taped interviews in English and Spanish for nearly 50 live and taped interviews in English and Spanish for TV and radio stations/conglomerates and print/web media along the Texas and Louisiana coasts. The program is estimated to have reached several million local residents. Spanish and English speaking NWS staff from Lake Charles, LA, Corpus Christi, Brownsville and Houston, TX, joined Mark Hanna, spokesman for the Insurance Council of Texas and Manuel Villarreal from the Texas Department of Insurance to update residents on the need to remain ready for the peak of the 2014 hurricane season by checking personal hurricane plans, kit, and insurance policies.

“The Insurance Council of Texas leads the tour each year to remind residents to check their policy portfolio,” said Hanna. “We remind everyone that residents living in hurricane prone areas should have three policies: One for homeowners (i.e., fire and theft), another for windstorm, and a third for flood inundation. Purchasing all of these policies ensures coverage and peace of mind should a storm like Beulah, Bret, Carla, Celia, or Ike strike Texas this season or any season.”

A third of the interviews were in Spanish, including a 1-hour program on Exitos, a program whose listening audience spans five states from New Mexico to Alabama. Radio Esperanza aired a similar NWS interview in Spanish; this program reaches much of Mexico and as far as Guatemala and Honduras.