



Aware

Aware is published by NOAA's National Weather Service to enhance communications between NWS and the Emergency Management Community and other government and Private Sector Partners.

June 2017

Community-Wide Tornado Safe Room Offers Residents Secure Option

By [Rick Shanklin](#), WCM, NWS Paducah KY



Dedication Ceremony for the Crofton, KY, Tornado Safe Room

In an effort to ensure all residents have a safe place to go during a tornado, the town of Crofton, KY, built a community tornado safe room. NWS Paducah helped dedicate the Tornado Safe Room which became a reality through the tireless efforts of city of Crofton, KY and the Christian County, KY, Emergency Management (EM) community. The tornado safe room is an excellent example of a community's effort toward the goal of becoming a Weather-Ready Nation.

The FEMA-compliant tornado safe room houses up to 500 people and is equipped with a range of safety features, including backup power. The tornado shelter also has a communication room to keep lines open with local, state and federal agencies as well as offering the ability to activate local tornado sirens.

The shelter has an International Code Council design wind speed rating of 250 mph. The \$723,000

facility was funded through a combination of federal grants and local and state funding. In addition, resources were contributed from individuals in the community. The facility is the second of its kind in Kentucky. For more information, see <https://www.fema.gov/safe-rooms>

Experimental Warn-on-Forecast Guidance Helps Improve Tornado Lead Time

By [NWS News Staff](#), Silver Spring, MD

An EF-2 tornado struck Elk City, OK, on the evening of May 16, 2017, killing one person and injuring eight others. It might have been much worse without the use of a Warn-on-Forecast prototype that increased forecaster confidence for significant tornadoes in western Oklahoma.

As part of their Seasonal Readiness Training, NWS Norman, OK, forecasters evaluated output from the National Severe Storms Laboratory's (NSSL) Experimental Warn-on-Forecast System for



From left Cooperative Institute for Mesoscale Meteorological Studies Scientist Patrick Skinner and NWS Norman, OK, Science & Operations Officer Todd Lindley use NEWS-e Warn-on-Forecast output.

ensembles (NEWS-e), a real-time prototype. Forecaster feedback helped NSSL scientists incorporate relevant features on the NEWS-e website and familiarized forecasters with the tool for warning operations.

Before NWS staff could see supercell thunderstorms forming in the Texas Panhandle on May 16, NEWS-e output depicted dangerous storms moving northeastward toward western Oklahoma. This output was displayed on NWS Norman's situational awareness display. A University of Oklahoma scientist from the model development team provided a briefing on the guidance in the operations area.

Once storms developed, NEWS-e contributed to a high degree of forecast confidence that the storms would become long-lived supercells with a risk of tornadoes. At 5:16 PM CDT, NWS Norman issued a Significant Weather Advisory stating "a high probability that tornado warnings will be issued" for parts of western Oklahoma. The office issued the advisory 32 minutes before the first tornado warning, 52 minutes before the first tornado was confirmed and more than 90 minutes before the deadly tornado impacted Elk City.

This use of NEWS-e is an example of the proposed Forecasting a Continuum of Environmental Threats (FACETs) approach, making it possible for forecasters to elevate tornado probabilities well before warning polygons are issues, giving greater advance notice. NWS forecasters and NSSL researchers have been testing these concepts in the Hazardous Weather Testbed since 2015.

NWS Hits the Road to Improve Partners Interaction

By [Vanessa Pearce](#), Meteorologist Intern, NWS Wichita, KS

This spring, NWS Wichita, KS, staff hit the road in an effort to enhance the office's annual convective workshop. Teams of NWS staff members went into the community to meet with a variety of partners at informal meetings to better understand their operations, decision process for weather events, and determine ways the NWS could improve communication or services to these partners.

Partners visited included a radio station with live weather coverage during events and storm spotters, a television station, the U.S. Geological Survey office, an emergency management (EM) and dispatch center, Kansas Department of Transportation, city and county water management officials, and EM staff at Wichita State University and a hospital.

Each team went to a selected restaurant for lunch during which they engaged in preparedness education and outreach by asking the restaurant manager about its severe weather policy. The office got almost every staff member involved from top management to our Administrative Support Assistant, all of whom reported a better understanding of partner needs after the spring sprint.



From left, Travis See, USGS, shows the river gage equipment to Jim Caruso, NWS Lead Meteorologist.

Flood Simulation Helps NWS Improve Services

By [NWS News Staff](#), Silver Spring, MD

In April, NWS Corpus Christi, TX, took part in the Bureau of Reclamation's (USBR) quadrennial emergency exercise for Choke Canyon Reservoir in Live Oak County, TX. The NWS West Gulf River Forecast Center provided simulated river forecasts for the exercise. The exercise brought together local, state and federal partners.

During the exercise, NWS staff gave several briefings on observed river levels, expected rainfall and potential downstream impacts of a large flood wave moving into the Choke Canyon Reservoir. This forecast

allowed the USBR to assess how much water to release. This simulated release then set into motion local and state mitigation plans.

“Having the ability to simulate a realistic major flood event with all the essential personnel in one room constantly communicating is fantastic. The Weather Forecast Office in Corpus Christi and the West Gulf River Forecast Center were vital to a successful exercise,” said Adam Milligan, USBR. “Everyone involved walked away with a new appreciation for hydrology and how vital constant communication is during a high impact event.”



Local, state, and federal partners work together as a simulated massive flood wave enters the reservoir.

Tri-State Meeting Improves Communications and Messaging

By [NWS News Staff](#), Silver Spring, MD



Partner discussion at Tri-State Integrated Warning Team meeting

This spring, NWS Wilmington, OH, and Hamilton County, OH, EMs jointly hosted a Tri-State Integrated Warning Team (IWT) meeting with some innovative communications options.

This IWT featured an interactive format. NWS meteorologists facilitated table-top discussions and moderated dialogue on a wide array of topics. Communications and messaging became a central theme. Attendees gained insight into how different partners prepare for and respond to hazardous weather. For instance, several partners stressed the usefulness of NWS “heads up” email blasts to alert them about potential hazardous weather. Partners also commented about how valuable dynamic

web briefings are for higher-end severe, flooding and winter events.

In a twist, the IWT included live polling technology to promote dialogue. For instance, one question asked what aspect of winter storm messaging is most important. The number one answer was clearly-stated impacts followed by event start and end times. An EM delivered a presentation on response associated with a train derailment, providing an opportunity for the NWS to highlight the weather support available during real world HazMat events and at EM agency exercises.

Attendees at the team meeting included local and state EMs, Departments of Transportation and area media. Kentucky EMA Area 6 Manager James Sparks commented: “I wanted to thank you guys again for all your support for me and my region. Thanks for putting on the IWT yesterday as it was a huge success. Keep up the great work that you all do!”

Collaboration to Save Lives: Great Lakes Water Safety Conference

By [Megan Dodson](#), Meteorologist Intern NWS Northern Indiana

Weather Forecast Offices (WFO) across the Great Lakes region teamed up with core partners in the water safety community to address the large number of drowning fatalities and rescues on the Great Lakes each year. Since 2010, there have been 544 drownings on the Great Lakes from a combination of dangerous waves and currents, boating accidents and pier washes. NWS works with the Great Lakes Water Safety Consortium, Sea Grant and other core partners to encourage swimmers and boaters alike to check the beach forecasts and statements along with marine forecasts before heading out on the water. The team promotes the slogan, “**Know Before You Go.**”

To brainstorm ways to reduce Great Lake fatalities, NWS meteorologists from Webster, IN; Grand Rapids, and Marquette, MI; Duluth, MN; and Milwaukee, WI; attended the 2017 Great Lakes Water Safety Conference in Sheboygan, WI, in April. The conference, hosted by the Great Lakes Water Safety Consortium, is an annual event aimed at bringing the key players together to end drowning on the Great Lakes.

The theme for the 2017 conference was “Bridging the Gaps” through collaborative efforts, scientific data, education and outreach, and risk communication. Topics included:

- ◆ Pier and boating safety
- ◆ Cutting edge research on dangerous currents from the University of Wisconsin-Madison
- ◆ Role of the lifeguard
- ◆ Review of recent Great Lakes drowning fatality and rescue statistics
- ◆ Beach kit maintenance and distribution
- ◆ Water safety education
- ◆ NWS forecasts and statements
- ◆ Media training

The meeting also featured demonstrations of innovative life-saving devices from the SENSE research team at Michigan Technological University. To really bring the problem home, two dangerous current survivors shared their stories, along with a family member of a recent drowning victim.



Left, kayak safety demonstration with Ohio Sea Grant and Spirit of America; right, MTU SENSE drone demonstration

Aware

NOAA's National Weather Service, Analyze, Forecast and Support Office
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Aware online: www.weather.gov/publications/aware ISSN 1936-8178
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