

Aware

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November 2019

Winds of Change: 2011 Tornado Outbreak and the Birth of a Weather-Ready Nation

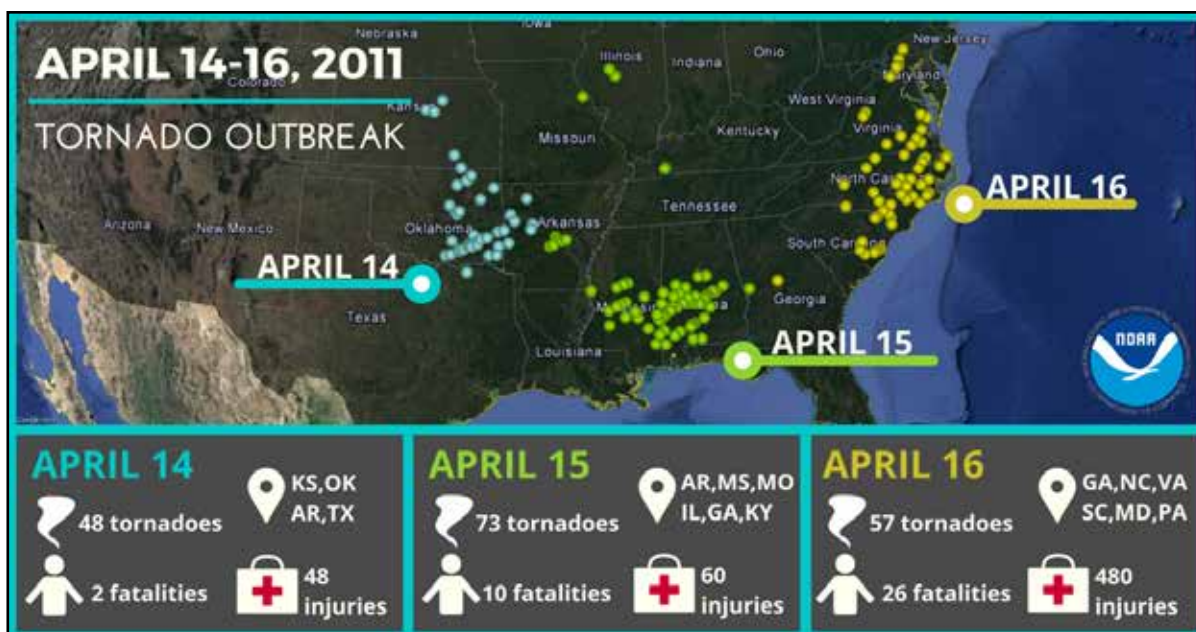
Since its storied yet humble beginnings almost 150 years ago, the NWS has been relentlessly dedicated to providing accurate, timely forecasts across the nation. As technologies have improved and communication capabilities have evolved, forecasts and warnings are more prompt and precise. NWS has seen monumental development and growth of forecasting and technological abilities, but more is needed to fully prepare a nation for impending storms.

In late April of 2011, a monstrous tornado outbreak ripped across the southeastern United States. Although NWS forecasts were extremely accurate and sent almost a week before the storm, there were still hundreds of fatalities. In fact, the 2011 outbreak resulted in almost the same number of fatalities as a similar outbreak in 1974, the latter event was forecast only a few days prior and left little time to prepare. The similarity between these two storms made obvious that preparation and resiliency are not enough.

In the months following the 2011 deadly tornadoes, NWS realized forecasts, while essential, were only valuable if they provided useful information to the right individuals. In other words, forecasts needed to not only be targeted to the public but also meet the needs of emergency personnel and public safety officers who would be making life- and property-saving decisions.

From this assessment, the concept of a Weather-Ready Nation (WRN) was born. WRN is a campaign designed to help increase readiness, responsiveness, and resilience for environmental hazards nationwide. To achieve a WRN, the NWS realized that it needed to better connect its observations, forecasts and warnings to decisions that save lives and protect property. This new national program supports the needs of our core partners through an approach called Impact-Based Decision Support Services (IDSS).

NWS' shift toward IDSS has helped foster an entirely new operational environment, firmly rooted in the services for our core partners, and supported by the integration of the social and physical sciences. While forecasts had previously focused primarily on meteorological phenomenon, it quickly became clear that achieving a WRN required consideration of human and societal factors to understand societal impacts. To that end, IDSS helped combine the



science and technology of the NWS with the over arching social aspects that would help forge a WRN. The concept of recognizing impacts along with over just meteorological hazards was also extended to our forecasts and warnings, which now place a greater emphasis on communicating potential impacts to the public.

Prioritizing IDSS was not motivated solely by the goal of a WRN; in part, it was due to a complete, unyielding dedication to the NWS mission. The need to connect improved forecasts and warnings to decision makers across the country with clear actions became a vital part of goal of protecting life and property. One major shift occurred in “Last Mile” forecasting: a refocusing to emphasize delivering forecasts and providing interpretive services directly to safety officials.

A primary goal of this effort is to ensure decision-makers and the public can make informed decisions in the face of impending weather, water, and climate events. To achieve this goal, NWS staff members use IDSS to focus on improving connections to decision makers across the country. Through IDSS and other initiatives such as Weather-Ready Nation Ambassadors and Storm-Ready Communities, NWS provides education and outreach to public safety officials and the public, building stronger connections with communities nationwide. This is a vital step towards improving the preparedness and resilience of our nation

Over the last decade, the NWS has recognized the key to accomplishing our mission and creating a prepared, resilient nation is to connect NWS forecasts and the life-saving decisions emergency managers (EM) and the public make to withstand them. Moving forward, the NWS is continuing its efforts to serve the public, assist decision-makers, and work towards creating a Weather-Ready Nation prepared for anything Mother Nature throws at us.

To read more, read a [Evolving the National Weather Service to Build a Weather-Ready Nation: Connecting Observations, Forecasts, and Warnings to Decision-Makers through Impact-Based Decision Support Services](#) by NWS Director Dr. Louis Uccellini and Dr. John Ten Hoeve, Deputy Director of the NWS Office of Organizational Excellence.

Trekking Through Mud to Support EMs at Luke Bryan’s Farm Tour Concert

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

This fall, NWS Wichita, KS, coordinated support with staff at Butler County Emergency Management to provide on-site support to an outdoor “Farm Tour” concert featuring country superstar Luke Bryan.

NWS forecasters sent daily threat matrices to officials a week before the concert. Forecasters had minimal weather concerns for the actual event, but in the days preceding, thunderstorms and heavy rain struck the area, turning the field site and the dirt roads into mud or worse. In total, 5 inches of rain fell in a 36-hour period in the couple of days before the event. Based on the muddy conditions and the field’s inability to withstand the heavy equipment required for the concert, organizers cancelled the concert the night before it was to occur.

At the last minute, a deal was made to relocate the concert at the Kansas State Fairgrounds in Hutchinson. Officials in Reno County frantically put together a plan of operations to which NWS Wichita offered its support. Reno County Emergency Management was grateful for on-site



Top: Concert set up for Luke Bryan’s Farm Tour in Hutchinson, KS. Bottom left, NWS Wichita, KS, Meteorologists Kevin Darmofal and Vanessa Pearce inside the command trailer; right, Pearce, Lawson and EM Andy Kleinsasser outside command center.

support that helped mitigate safety concerns for concert goers. Even though there was less rain in that location, it was still plenty muddy.

Gravel had to be brought in for emergency vehicles, and concert goers had to trek through the mud near the stage in the dark. Concert attendees weren't as compacted together as at other concerts because of large muddy areas, creating logistical problems. Reno County Emergency Manager Adam Weishaar told NWS Wichita, "We truly appreciate the work you and your team provided for us on such short notice. They were all very helpful and a joy to be around. I hope they enjoyed coming out as much as we enjoyed having them."

Staff appreciated the opportunity to communicate with city and county officials. Support for this event highlights the importance of having a well-established and trusting relationship with NWS Core Partners in advance of a potential need.

SKYWARN Students "Like" Facebook Live Class

By [John Moore III](#), Meteorologist,
NWS Jackson, MS

On the evening of October 29th, NWS Jackson, MS, hosted a SKYWARN weather spotter class using the Facebook Live platform. The class was promoted on all social media platforms and through correspondence with partners weeks in advance.

This course was planned and produced by Meteorologist John Moore using Open Broadcaster Software in conjunction with Facebook Live. Warning Coordination Meteorologist Felecia Bowser optimized the SKYWARN presentation for online broadcast and served as the on-camera presenter.



NWS Jackson, MS media room with Facebook Live Skywarn Spotter class setup.

NWS Jackson Information Technology Officer Mark Wilson developed a spotter certification method using Google Forms that required passwords given during the class. Once class attendees entered the passwords into the Google Form, they were emailed a certificate with their name. Meteorologist Nick Fenner helped during the event by answering questions and engaging attendees through comments posted on the video.

The session was a success by all means of measurement. The Facebook Live class had a peak live viewership of 93, but never fell below 76 viewers during the session, which lasted 1 hour and 15 minutes. NWS Jackson received more than 60 requests for certificates, making it one of the office's most attended Skywarn Spotter classes of the fall season.

Class attendees were quick to comment on their experience during the class: "I liked being able to do the storm spotter class on Facebook Live because I have no vehicle, so it's not always possible for me to get to the in-person classes because they're usually too far from me. Plus, doing it this way, I have less chance of distractions around me (I have terrible A.D.D., and have trouble keeping focused if there's a lot of distractions around me)." Another user commented, "Excellent presentation. Thank you for your time and dedicated service to keep us WX alert and informed!" Several attendees commented they were looking forward to more safety and severe weather presentations from NWS Jackson using the interactive Facebook Live format.

After reviewing the feedback from this event, NWS Jackson Meteorologist-in-Charge Bill Parker is ecstatic about the office implementing Facebook Live in other areas of public outreach.

WRN Program Surpasses 10,000 Ambassadors

By [Doug Hilderbrand](#), WRN Program Lead, Silver Spring, MD

Total Weather-Ready Nation (WRN) Ambassadors now exceed 10,000 organizations. More than just a number, this mile marker is a reflection of the NWS's commitment to strengthening community resilience across the nation. From Fortune 500 companies to local police and fire departments, our WRN Ambassadors are sharing weather safety information, assisting with community events, and engaging parts of communities that are beyond the reaches of the NWS.

The WRN Ambassador™ initiative is the effort to formally recognize NOAA partners who are improving the nation's readiness, responsiveness, and overall resilience against extreme weather, water, and climate events. As a WRN Ambassador, partners commit to working with NOAA and other Ambassadors to strengthen national resilience against extreme weather. In effect, the WRN Ambassador initiative helps unify the efforts across government, non-profits, academia, and private industry toward making the nation more ready, responsive, and resilient against extreme environmental hazards. WRN is a strategic outcome that says society's response should be equal to the risk from all extreme weather, water, and climate hazards.

Improving society's responses to extreme weather, water, and climate events require a whole community approach, and the WRN Ambassador program is putting this concept into action. WRN Ambassadors are also helping communities become weather-ready by serving the needs of vulnerable populations, such as the deaf and hard of hearing community, and by translating NWS information in other languages.

Many of you may be thinking, what's next? Taking time to celebrate 10,000 WRN Ambassadors is a good time to focus more attention on answering this question. The real value of the WRN Ambassador program is not "how many?" but rather how are our Ambassadors making a difference? As we go beyond 10K, we collectively need to continue sharing successful ideas, exploring innovative opportunities, and embracing further the whole community approach. For more information on the WRN and the Ambassador program, [see our WRN site](#).



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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