



Aware

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From the Top

NWS Releases Weather-Ready Nation Roadmap 2.0

By [Louis Uccellini](#), NWS Director

Louis Uccellini,
NWS
Director



On April 24, in partnership with the NWS Employees Organization (NWSEO), we released the [Weather-Ready Nation \(WRN\) Roadmap 2.0](#). The updated Roadmap blends an understanding of social and physical sciences and lends itself to building community resilience in the face of increasing vulnerability to extreme weather and water events.

I'm confident that this updated version of the Roadmap will empower Emergency managers (EM), first responders, government officials, businesses and the public to make faster, smarter decisions to save lives and protect livelihoods.

The WRN Roadmap 2.0 incorporates comments from the 2012 National Academy of Sciences report and from internal and external NWS stakeholders. This updated version also covers NWS international activities.

This Roadmap reiterates our commitment to work with the Weather Enterprise and provides a flexible and agile business structure. In addition, there are more details that capture the role of National Centers for Environmental Protection in Impact-Based Decision Support Services and in contributing to a Common Operating Picture across the NWS.

In 2011, the country lost more than 1,000 lives and suffered over \$55 billion in damage from powerful tornadoes and other storms. This Roadmap puts the NWS on a more responsive path. In the future, NWS will measure its efforts by the extent to which people effectively respond to our warnings and not solely on the accuracy and timeliness of our forecasts.

I encourage you to read this document from cover-to-cover and recognize how we all, both individually and collectively, make a difference every day in creating a Weather-Ready Nation.

From 2009-2012, NWS delivered lifesaving weather forecasts and warnings for an unprecedented spate of record-breaking weather:

- ◆ Tornadoes: 770+ major storms
- ◆ Hurricanes: 70 Atlantic hurricanes and tropical storms
- ◆ Major floods: 6
- ◆ Tsunamis: 3

In addition the country suffered historic drought levels, prolonged heat waves, and record snowfall and blizzards across the country.

Constant improvements in our forecasting capabilities and the expertise of our meteorologists and hydrologists nationwide have enabled NWS to deliver warnings often with greater lead times and accuracy than ever before.

The Roadmap ensures the NWS will remain relevant and timely in its provision of services and data to EMs and other users of our products.

The next step is to incorporate the Roadmap into the NOAA/NWS Annual Operating Plan, ongoing WRN Goal Planning, NOAA and NWS Research Plans and other appropriate mechanisms.

The Roadmap is intended to be a living document. We will refine it as we move forward.

The Roadmap is intended to empower you, as part of the Weather Enterprise, to make faster, smarter decisions to save lives and protect livelihoods. We can only attain these goals with your support.

New Products and Services

Tornado and Severe Thunderstorm Watch Text Products Get New Look

By [John Ferree](#), NWS Severe Storms Service Leader; [Bill Bunting](#), SPC Operations Branch Chief

On April 16, the Storm Prediction Center began issuing the Public Watch Notification Message (SEL) in a bulleted format that improves readability, is consistent with convective warnings, and includes more specific wording about threat information.

The threat information is based on the existing tornado, damaging wind, and large hail watch hazard probabilities, and is intended to better convey the severe weather risks for each tornado and severe

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URGENT - IMMEDIATE BROADCAST REQUESTED
TORNADO WATCH NUMBER 123
NWS STORM PREDICTION CENTER NORMAN OK
935 AM EDT THU APR 18 2013

THE NWS STORM PREDICTION CENTER HAS ISSUED A

* TORNADO WATCH FOR PORTIONS OF
EASTERN ILLINOIS
CENTRAL AND EASTERN INDIANA
SOUTHERN LOWER MICHIGAN
NORTHWEST OHIO OHIO
LAKE MICHIGAN

* EFFECTIVE THIS THURSDAY MORNING AND AFTERNOON FROM 935 AM UNTIL
500 PM EDT.

...THIS IS A PARTICULARLY DANGEROUS SITUATION...

* PRIMARY THREATS INCLUDE...
SEVERAL INTENSE TORNADOES LIKELY
SEVERAL SIGNIFICANT DAMAGING WIND GUSTS TO 80 MPH POSSIBLE
A FEW VERY LARGE HAIL EVENTS TO 2 INCHES IN DIAMETER POSSIBLE

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The new Enhanced Bulleted SEL format includes primary threats (highlighted) to better convey severe weather risks

thunderstorm watch. The modified watch message format includes three bullets:

- ◆ Watch type and area description
- ◆ Watch expiration time
- ◆ Primary threats in order of importance

When there is a likelihood of multiple strong or violent (EF-2–EF-5) tornadoes in a tornado watch, the SEL will include “...THIS IS A PARTICULARLY DANGEROUS SITUATION...” between the second and third bullet. This statement also may appear in a severe thunderstorm watch when conditions are favorable for widespread significant non-tornadic severe weather events, such as convective winds greater than 75 mph.

The three bullets will be followed by a paragraph with a general area description including the axis of the watch.

The new format also includes Call-To-Action (CTA) markers similar to other watch and warning products. The CTA markers will use “PRECAUTIONARY/PREPAREDNESS ACTIONS...” and && character strings to indicate the CTA beginning and ending, respectively.

Following the CTA are the following three sections:

1. OTHER WATCH INFORMATION...
2. DISCUSSION...
3. AVIATION...

The watch will end with:

...FORECASTER NAME

More SEL examples in the [Enhanced Bulleted Format](#) are online.

Decision Support

Updates to Heat Criteria Helps Save Lives

[Alex Tardy](#), WCM, NWS San Diego, CA

This spring, researchers from the University of California, San Diego (UCSD) at Riverside, San Diego

County’s health departments and epidemiologists, and the California Office of Environmental Health Hazard Assessment met at NWS San Diego to discuss proposed changes to the state’s heat criteria.

In the past year, NWS has worked with several county health departments, media outlets and UCSD to design a study addressing the relationship between NWS hazard products, heat related mortalities and morbidity, and ambient temperature (not just the heat index).

The study identified a need for county public notifications to offer a consistent message tied to NWS alerts. Despite the fact that the local NWS office rarely issues heat advisory products, the county heat emergency plans all include these



UCSD, Kristen Guirguis, presents on heat impact research to the counties of San Diego and Riverside health departments.

products as a trigger. The study also revealed a disconnect between NWS issuing heat products and county heat activation plans. These plans set standards for opening cooling centers and making other resources available to the public.

The new state criteria and improved decision support services for state and local officials will better align neighboring NWS offices in the desert southeast area of California. The revised process includes notification of state and local officials, as needed, and appropriate watches, warnings and advisories.

In the past 5 years, NWS San Diego issued few heat hazard warning products. Products were only for inland areas and only based on hitting an extremely high heat index level.

NWS San Diego did not issue advisories or issue any notifications for most of its forecast area of responsibility despite the morbidity data that indicates significant impact during heat waves for southwest California.

WCM Alex Tardy has been partnering with UCSD on the research addressing heat waves in California and morbidity and mortality impacts. This publication should be available in late 2013. UCSD and Scripps already have proposed more research on heat related topics. NWS San Diego has written support letters for grants.

Outreach Updates

IAEM Seeks Outstanding Candidates for Top Awards

[Donna Franklin](#), NWS Awareness Branch

And the winners are... The International Association of Emergency Mangers (IAEM) sent out a call for nomination for its prestigious Awards Competition.

The competition recognizes and honors individuals who have made special or significant contributions to the field of emergency management and have represented the profession well by their outstanding performance. The awards categories include:

- ◆ Business and Industry Preparedness
- ◆ Partners in Preparedness
- ◆ Public Awareness
- ◆ Technology and Innovation

Do you know someone who has developed new software to improve EM operations, created an

effective multi-hazard plan, implemented an innovative preparedness campaign, or wowed students with an outside-the-box education program? [Nominate them!](#)

The deadline for entries is May 31. Find out more details about the prestigious awards online.

Team Approach Work for Boating Safety Blitz

[Ted Buehner](#), WCM, NWS Seattle, WA

In 2012, Washington state alone numbered 32 boating fatalities and many more capsized boats. In an effort to reduce this tragic number, on April 30, NWS Seattle WCM Ted Buehner teamed up with Dan Shipman from U.S. Coast Guard District 13, Wade Alonzo of Washington State Parks Boating Safety, Elizabeth Bennett and Dr. Linda Quan from Seattle Children's, and Sgt. Cindi West from King County Sheriff's office to conduct a Water Safety Media Tour.

The team blitzed the media with a 1-day tour of all Seattle area TV and radio news stations. Timing was fantastic because NWS Seattle had forecasted a week of warm spring weather for the opening of boating season.

The team encouraged boaters to prepare for fast changing weather conditions, especially when they are in small easily capsized vessels:

- ◆ Always wear a life jacket
- ◆ Seek out instruction and training from resources such as [Boater-Exam](#), a free online course
- ◆ Never take a boat out alone
- ◆ Boat sober
- ◆ Know where you are going and the current weather and water conditions.

Team members also encourage newscasters to observe May 17 as "wear your life jacket to work day." The team gave each TV station an inflatable life jacket and encouraged



Elizabeth Bennett, of Seattle's Children's Hospital, offers a TV spot on using new youth life jackets.

newscasters to wear them on the air. We also pitched a boating safety event at a nearby marina and a life jacket sale sponsored by Seattle Children's.

The media tour highlighted how quickly a person goes into shock in western Washington's cold rivers and lakes, which are in the 40s in May. Response from the media was outstanding. We conducted 14 interviews and made a number of great contacts at local stations. The team approach helped open media doors for this event.

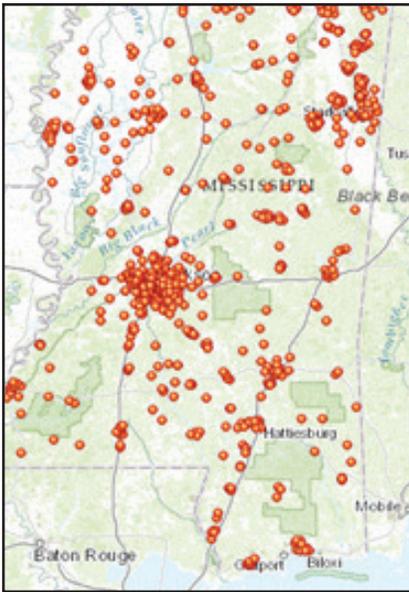
Statewide Tornado Siren Policy Developed

[Steve Wilkinson](#), WCM, NWS Jackson, MS

The Joplin, MO, tornado Service Assessment recommended, "Guidance should be developed to assist partners in the development of local warning system and siren strategies that work in conjunction with NWS warnings rather than independent of them."

In response to this recommendation, the Mississippi Civil Defense and EMA formed a team to develop a statewide tornado policy recommendation.

The team consisted of three local EMs and a representative from the Mississippi EMA and NWS. After extensive discussion, the team



Siren locations in Mississippi. Map developed by NWS Jackson, MS.

agreed on the following recommendations for siren activation criteria:

- ◆ Sirens should be primarily for tornado warnings. Exceptions may include when a severe thunderstorm warning mentions 80 mph or greater winds or when a tornado watch is in effect and a severe thunderstorm warning is issued; however, these exceptions should be coordinated among neighboring jurisdictions.
- ◆ Sirens should be activated when the sirens are in or near the NWS polygon. “Near” could be defined as within 5 miles but this is a local judgment call. Sirens should not be activated on a county-wide basis unless the tornado warning covers the entire county, assuming technology allows for individual or groups of sirens to be activated.
- ◆ The initial siren alert should be a 3 minute burst, followed by a 1 minute pause, and then continue the sequence of 3 minute bursts with a 1 minute pause until the threat has passed. When the threat has passed, there should be no siren all-clear.

Tornado Siren Test Policies

- ◆ Sirens should be audibly tested no more than once a month.
- ◆ Jurisdictions that border each other where siren coverage may overlap should have the same siren test policy frequency and time. This recommendation is mainly for the Jackson, Memphis, and Hattiesburg metro areas.

Tornado Siren Education

Jurisdictions should publish maps showing where siren coverage exists through local newspapers, Web pages, social media, etc., at least once a year during Severe Weather Preparedness Week.

This education effort should also include the times when the sirens are tested and the conditions in which they are activated.

This education also helps ensure residents know if they are not covered by sirens and reminds the public sirens are only effective as outdoor warning systems.

Warning Redundancy

Jurisdictions should work to develop alternative forms of alert notification because sirens are only effective as outdoor warning systems. To further bolster the siren program, NWS Jackson created a map displaying Mississippi’s sirens. In the future, the office will apply a 1, 2 and 3 miles radius around each siren and compare the radius’s effective coverage area to the total land

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Division Chief **Cindy Woods**
Branch Chief: **Mike Szkil**
Managing Editor: **Melody Magnus**
Editors: **Donna Franklin, Nancy Lee**

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area and population distribution across the state. The goal is to show the strengths and weaknesses of the siren network. This type of analysis will be available upon request at the county level to assist EMs when planning new sirens.

Weather Facts to Reach Millions of Kids

Donna Franklin, NWS Awareness Branch

Kidsville News!, an online and print newspaper aimed at children in grades K-6, asked NWS to write a weather-related article each month for the next year for their Special Feature section.



The vision of *Kidsville News!* is to provide a quality literacy and education resource to all children that will impact, enhance and encourage a child to read, study and have fun. *Kidsville News!* reaches 4 million kids, teachers and parents, including 1.5 million through its print version, published in 11 states.

“Lightning and Lightning Safety” was featured in the May edition. Other topics for the next year include safety at the beach, climate change, hurricanes, weather balloons, the water cycle, weather optics, winter storms, U.S. weather extremes, clouds, floods and tornadoes. Check out *Kidsville News!*