Weather-Ready Nation
National Oceanic and Atmospheric Administration
Aware

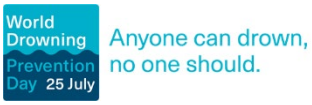
August 2021

Rip Current Safety Toolkit Now Live

By: Deborah Jones, Marine, Tropical, and Tsunami Services

There have been at least 71 surf-zone fatalities reported so far in 2021, including 52 due to rip currents alone. The NWS Marine Program, in collaboration with the United States Lifesaving Association (USLA), has developed a rip current safety toolkit for those who wish to provide education on rip currents or advocate for rip current safety. The toolkit contains a variety of outreach materials that provide NWS/USLA-approved rip current safety language. Advocates may include coastal safety trainers, schools, and educational programs. NWS has also been approached by families who have lost loved ones to rip currents and want to develop their own safety campaigns or foundations with accurate scientific information. This toolkit assures accurate and consistent messaging for any user, providing both improved clarity to the public and amplified reach of important safety information. The rip current safety toolkit comes out in a year that has a record-breaking pace for rip current deaths.

This new NWS tool is well-timed to recognize and support World Drowning Prevention Day, held annually on July 25. This global advocacy event is intended to highlight the tragic and profound impact of drowning on families and communities, as well as offer life-saving solutions to prevent it.



September is National Preparedness Month

By: Douglas Hilderbrand, NWS Preparedness and Resilience Program Lead

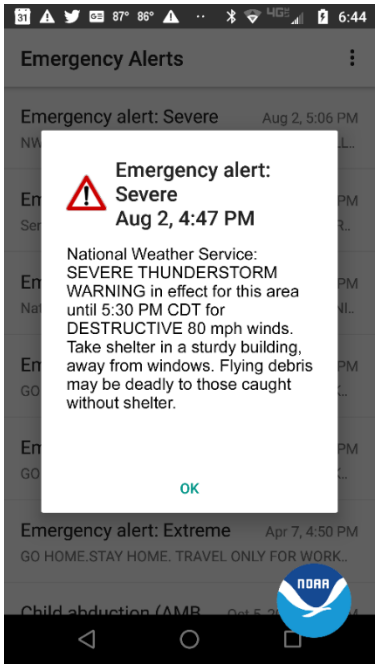
September is a month of transition. Flip-flops and beach towels are exchanged for backpacks and footballs. As the long summer days keep getting shorter and the leaves show signs of turning colors, September is the perfect month to review your state of preparedness and take steps toward greater resilience -- as a community, as a family, as an individual. The National Weather Service is proud to support our close partners at FEMA and others across the federal family by participating in National Preparedness Month. Just a few highlights next month include the launch of the Fall Weather Safety Campaign, continued hurricane preparedness messaging as we approach the peak of hurricane season, and the launch on September 20 of the 2021 Weather-Ready Nation Ambassadors of Excellence. Each of these opportunities is a great way for everyone to get involved in helping build a Weather-Ready Nation. Our Weather-Ready Nation website contains an array of resources for you to take advantage of, including hot off the presses weather safety infographics such as the graphic below. All content posted on the WRN website is freely available for everyone to view, repost, and use to encourage others to take that next best preparedness action. Only by working together can we better serve those most vulnerable and help make everyone “weather-ready.”

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 as part of a Weather-Ready Nation.

New "Destructive" Severe Thunderstorm Warning Category to Trigger Wireless Emergency Alerts on Mobile Phones

By: News Around NOAA Staff

Severe thunderstorms can be life-threatening, but not all severe storms are the same. Hazardous conditions range from tornadoes, large hailstorms, and widespread straight-line winds called derechoes, to cloud-to-ground lightning and flash flooding. Starting August 2, the National Weather Service will add a "damage threat" tag to Severe Thunderstorm Warnings, similar to our Tornado and Flash Flood Warnings, to better convey the severity and potential impacts from thunderstorm winds and hail.



The three categories of damage threat for Severe Thunderstorm Warnings, in order of highest to lowest damage threat, are **destructive**, **considerable**, and **base**. These tags and additional messaging are designed to promote immediate action, based on the threats.

> **Destructive damage threat** - at least 2.75 inch diameter (baseball-sized) hail and/or 80 mph thunderstorm winds. Warnings with this tag will automatically activate a Wireless Emergency Alert (WEA) on smartphones within the warned area.
>
> **Considerable damage threat** - at least 1.75 inch diameter (golf ball-sized) hail and/or 70 mph thunderstorm winds. This will not activate a WEA.
>
> B**aseline ("base") severe thunderstorm warning** - unchanged, 1.00 inch (quarter-sized) hail and/or 58 mph thunderstorm winds. This will not activate a WEA. When no damage threat tag is present, damage is expected to be at the base level.

On average, only 10 percent of all severe thunderstorms reach the destructive category each year, nationwide. Most of these storms are damaging wind events such as derechoes and some of the larger, more intense thunderstorms, called "supercell" storms that can typically produce very large hail in their path. The new destructive thunderstorm category conveys to the public that urgent action is needed, a life-threatening event is occurring and may cause substantial damage to property. Storms categorized as destructive will trigger a WEA to your cell phone.

National Weather Service Severe Thunderstorm Warnings will continue to be issued and distributed via weather.gov, NOAA Weather Radio, Emergency Alert System, and through dissemination systems to our

emergency managers and partners. The addition of damage threat tags are part of the broader Hazard Simplification Project to improve communication of watches and warnings to the public.

Thirteen of the 22 costliest weather disasters in 2020 were severe thunderstorms. The new "destructive" tag would have activated a Wireless Emergency Alert for many of these impactful events, including the costliest thunderstorm in U.S. history, the $11 billion derecho that affected Iowa in August 2020.

Remembering the August 10 Midwest Derecho: Second Costliest Severe Thunderstorm Event in United States History

By: NWS Central Region Staff

This August marks one year since a long-lived line of severe storms known as a "derecho" caused severe wind damage across portions of South Dakota, Nebraska, Iowa, Illinois, Wisconsin, Indiana, Michigan, and Ohio on Monday, August 10, 2020. A large area from central Iowa to north central Illinois experienced wind gusts of 70-80 mph, and some areas experienced maximum wind gusts of over 100 mph. The storm system also produced 26 weak tornadoes (rated EF-0 to EF-1 with wind speeds of 65 to 110 mph) in Iowa, Wisconsin, Illinois, and Indiana, although damage from the tornadoes was similar in magnitude to that caused by the straight-line winds covering a much larger area.

The leading edge of storms moving into the Le Mars, Iowa area.
Photo credit: Dave Nicks

This particularly significant derecho event caused widespread power outages and downed trees, damaged structures, toppled semi trailers, and flatted crops over a large area. Damaging winds covered an area of at least 90,000 square miles, which is home to over 20 million people. In some locations, these damaging wind gusts occurred during a 30-45 minute period. The most extreme damaging wind gusts (those estimated over 100 mph) occurred in portions of central and eastern Iowa as well a few isolated locations along the Iowa/Illinois border and in Illinois. Wind gusts in excess of 100 mph were estimated to have covered an area of at least 2,000 square miles, which is home to over 300 thousand people. The strongest estimated wind speeds in the vicinity of Cedar Rapids, Iowa, were among the highest wind speeds ever recorded during a derecho event, peaking at about 140 mph. NOAA estimates indicate this was the second costliest thunderstorm event in recorded history for the United States, causing more than $11 billion in damage.

The NOAA/NWS Storm Prediction Center issued numerous outlooks and watches throughout the day to provide advance notice of potential severe weather conditions.

After storms formed, ten different NOAA National Weather Service Weather Forecast Offices issued Severe Thunderstorm Warnings to communicate the imminent threat of severe weather as storms traversed the Midwest.

Offices also provided proactive weather briefings to city and county emergency managers, which led to a significant amount of closures, evacuations, and event cancellations, including timely evacuations of several outdoor COVID-19 testing sites.

Weather support to the aviation community resulted in decisions that improved efficiency of the National Airspace System and led to a proactive ground stop ahead of severe storms impacting Chicago's O'Hare and Midway International Airports. Partnerships forged between the NWS, city and county emergency management officials, and the broadcast media helped save lives during this extreme weather event.

To learn more about this and similar weather events, as well as resources for severe weather safety, view the full story map here.

Aware

NOAA's National Weather Service, Analyze, Forecast and Support Office

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