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.

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New Products and Services

Hurricane Sandy Spurs Warning Change

Tim Schott, Meteorologist, NWS Marine and Coastal Services Branch

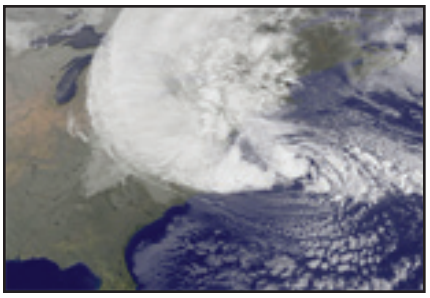
The term "Post-Tropical Cyclone" describes a storm that no longer meets tropical cyclone criteria, such as Hurricane Sandy when it struck the New Jersey coast in 2012. This term covers tropical cyclones that have become extratropical as well as remnant lows.

Although NWS issued watches and warnings well in advance of Sandy's landfall, these watches and warning were not for a tropical storm. Some partners felt this confused the public. NWS listened and as result issued a Service Change Notice announcing two policy changes that take effect June 1.

First, NWS is broadening the definitions of hurricane and tropical storm watches and warnings to allow NWS to issue these alerts or keep them in effect after a tropical cyclone becomes post-tropical.

Second, the National Hurricane Center (NHC) and the Central Pacific Hurricane Center (CPHC) will be able to continue issuing advisory products after a tropical cyclone becomes post-tropical in cases where the storm poses a significant threat to life and property and in which the transfer of responsibility would result in confusion to partners.

This change includes NWS Guam. The updated definitions and an example of an NHC-issued Public Advisory (TCP) of a post-tropical cyclone is online.



Hurricane/Post-Tropical Storm Sandy

In summary, for future potentially major storms such as Sandy, this policy will let NWS issue tropical watches/warnings at the outset, allow them to stay in place into the post-tropical phase, permit the NHC and CPHC to retain the lead in issuing advisories for the post-tropical phase, and permit Weather Forecast Office Guam to issue advisories for the post-tropical phase.

NOAA Streamlines Emblem, Logo Approval

Wendy Levine, Physical Scientist, NWS Office of Strategic Planning

NWS works closely with its partners in the weather enterprise—government, private sector weather providers and academia—to meet the varied information needs of its users.

NWS partners often provide their customers with data and products from NOAA and NWS and often want to include the NOAA emblem or NWSlogo. That process just got simpler.

To prevent misuse, the government has trademarked "National Oceanic and Atmospheric Administration," "National Weather Service," the NOAA emblem and the NWS logo. Because these identifiers are trademarked, applying for a license to use these identifiers follows strict guidelines and has in the past required multiple approvals for each request.

Beginning in March 2013, users can access a form requesting permission to use the NOAA emblem or NWS logo for the following purposes:

- Identify use of unaltered NWS data, products or outreach information
- Identify an online link to a NOAA or NWS Webpage.

NWS will review and respond to all requests within 2 weeks of receipt. According to Edward Johnson, Director of NWS's Strategic Planning and Policy Office, "Clear identification of NOAA/NWS's ownership of information will directly benefit both NOAA and the Nation's environmental information enterprise.

NOAA emblem and NWS logo

"Private sector environmental information service providers will be able to more effectively serve customers seeking an authoritative source of environmental information. I believe this service will help foster effective partnerships within the weather enterprise as a whole as we work together to build a Weather-Ready Nation."

Decision Support

Japanese Dock Lands on North Washington Coast

Ted Buehner, WCM, NWS Seattle, WA

Remember the devastating tsunami that struck Japan in 2011? Last winter, a large concrete dock washed up on the Washington coast in Olympic National Park near the Marine Sanctuary, a belated "gift" of the tsunami. The site is remote, requiring travel on more than 3 miles of rugged logging roads and fording a creek as well battling extreme weather and waves at the site.

To aide the dock's removal, NWS Seattle provided two spot forecasts for the assessment trip in January. NWS forecasted a window of opportunity that would allow the team to reach the site, not always accessible, and decide whether to tow the dock back to Port Angeles, WA, or dismantle it on site. The team determined it would have to dismantle the dock on site.

In Mid-March, NWS Seattle again provided twice-daily spot forecasts that not only involved weather and sea forecasts for the next 2 days, but also low-level winds aloft and ceiling and visibility forecasts to support the three helicopters involved in the debris airlift. The salvage operation, funded by Japan, finished on March 25. Video of the removal and of time lapses and related actions are online.

The salvage effort involved first removing the dock's layers of styrofoam that would have polluted area waters in the nearby National Marine Sanctuary, then dismantling the dock's concrete, and then airlifting all the pieces about 2 miles to a point where it could be trucked away. Three different kinds of helicopters were used including a Chinook.

The NWS spot forecasts were used to ensure safety for the daily movement of staff by helicopter to and from the salvage operation site, movement of equipment into and out of the site, and in the dismantling process and debris removal.

Japanese dock that washed on to the rugged north Washington coast.

Dave Lott, West Coast Operations Coordinator for NOAA's Office of Marine Sanctuaries said, "The spot weather information provided by NWS Seattle to the NOAA's Office of Marine Sanctuaries, the National Park Service, and the salvage contractor was invaluable to the successful removal operation of the tsunami debris dock."

Weather Ready for Eco and Enviro Partners

Todd Barron, Emergency Response Specialist, NWS Tampa Bay Area, FL

The Emergency Response Specialists (ERS) working the Weather-Ready Nation pilot in NWS Tampa, FL, hosted an Ecological and Environmental Workshop at the NOAA Fisheries Service in St. Petersburg, FL.

ERSs **Mike Gittinger**, **Todd Barron**, and **Rick Davis** led discussions on new and enhanced NWS products and services, future objectives of the Tampa pilot, weather and climate thresholds of various agencies, and weather hazards that may require an environmental response.

Various local, regional and federal partners learned more about the pilot program and offered insight on how weather impacts affect operations. Midway through the meeting, the audience was divided into three breakout groups based on individual expertise in response, water or wildlife. The ERS Meteorologists discussed specific impacts, thresholds, gaps in current NWS forecasts, and lead-time concerns.

The information gathered from the stakeholders resulted in an impacts catalog, featuring the stakeholder's weather thresholds and high impact concerns. The catalog will help local NWS Tampa design new services and update products to provide more effective decision support services.

Dissemination News

WEA Saves Lives; Geotargeting Improves

Mike Gerber, Meteorologist, NWS Dissemination Services

On June 28, 2012, the most critical NWS warnings began triggering Wireless Emergency Alerts (WEA) on WEA-capable cell phones. In the 9 months since, more than 3,000 NWS warnings have triggered WEA. The service has already begun to prove its value in saving lives, geotargeting has improved for some users, and WEA is now the official name of the service.

Most recently, WEA was credited with saving lives during a tornado that struck Jefferson County, MS, on February 21, 2013. A woman was about to go to bed when she received a WEA. She turned on the television and then looked outside and saw the tornado backlit by lightning. She and her family took shelter in the bathtub. The tornado struck her home, heavily damaging the bedroom where she and her

husband would have been sleeping. The family, which lives in a rural area without sirens, credited WEA with saving their lives.

Depending on their wireless carrier, users with WEA capable cell phones may notice improved geotargeting of tornado and flash flood warnings compared to last year. The four largest wireless carriers now target their WEA broadcasts to an area defined by a warning polygon, often at the sub-county level. WEA broadcasts still may be received outside of the actual warning area—particularly in rural areas, depending on the range of the cell tower.

On February 25, the FCC officially renamed the Commercial Mobile Alert System (CMAS) to WEA. The change was to "conform the name" of the service to that used by the major commercial mobile service providers broadcasting the alerts and to "reduce public confusion." There is no change to the service.

NWS continues to monitor feedback, perform outreach, and work with the Department of Homeland Security, FEMA, and the wireless industry to help improve WEA and enhance public awareness of this service. For more information about WEA, visit the following sites.

- NWS Use of WEA
- Wireless Industry Info on WEA
- How to Send Messages to IPAWS and WEA

Outreach Updates

Spanish Outreach Helps Protect At-Risk Residents

NWS News Staff, Silver Spring, MD

The Salinas Valley of California produces nearly $4 billion worth of agricultural products shipped throughout the U.S. and the world. Workers are outside nearly every day of the year in some portion of Monterey County, creating a heavily impacted population who need accurate information to ensure public safety.

Like many NWS local offices, NWS Monterey, CA, serves a diverse population, many of whom do not speak English. Within Monterey County alone, 52 percent of the population speaks a language other than English at home, in the majority of cases, Spanish. These residents have greater difficulty using weather, safety and tsunami information.

To reach the Spanish-speaking community, many NWS offices around

From left, NWS Monterey, CA, Forecaster ***Carolina Walbrun*** *and student volunteer* ***Areana Flores.***

the county engage partners such as the Office of the Monterey County Agricultural Commissioner, which has close ties to the local Spanish-speaking population. NWS Monterey Forecaster **Carolina Walbrun** and volunteer **Areana Flores** took part in the March 19 Monterey County Agriculture Expo, which was cosponsored by the Commissioner's office. All presentations at the event were in Spanish.

In partnership with the California Emergency Management Agency, Walbrun and Flores, both fluent Spanish speakers, gave out pamphlets and showed tsunami inundation maps provided by the California Geological Survey. The tsunami inundation zones include local agricultural areas where many Spanish speaking residents work and live.

Walbrun and Flores also spoke with numerous farm laborers, growers, and partner agencies from the Salinas Valley, answering questions and sharing sources of information on hazardous weather residents can use during potentially dangerous situations.

Dust Storm Workshop Spurs Innovative Solutions

Ken Drozd, WCM, NWS Tucson
Ken Waters, WCM, NWS Phoenix

Dust storms affect weather, transportation, driver behavior, land use practices and air quality. On average, dust storms lead to two deaths and numerous injuries and vehicle accidents each year in Arizona as well as lengthy traffic delays.

In response, WFOs Phoenix and Tucson, AZ, partnered with the Arizona Department of Transportation to host a Dust Storm Workshop on March 5. The workshop offered attendees the chance to evaluate and discuss long-term initiatives to protect the public before, during and after a dust storm.

As a result of the meeting, NWS and the Arizona Department of Transportation (ADOT) are expanding

Dust Storm Safety Video available at ***pullasidestayalive.org***

their dust storm program: Pull Aside Stay Alive. The goal of the program is to get drivers to stay away from potentially fatal driving conditions.

The team is also developing a dust storm mesonet to improve forecasts. The Dust Detection Network would use the latest low-cost tech-

nology of Arduino and Raspberry Pi computer platforms. The mesonet uses the NWS volunteer spotter network to provide real-time notification of dangerous dust visibility issues

Dust storms create pollutants which can lead to respiratory difficulties in susceptible populations. NWS and the ADOT are looking for ways to better alert people to this extreme hazard. The workshop drew 60 attendees representing public safety, emergency management, air quality, agriculture, academia and the research community.

Team Work Helps Reduce Rip Currents Deaths

NWS News Staff, Silver Spring, MD

Rip currents account for at least 100 U.S. drownings and hundreds of rescues each year according to the U.S. Lifeguard Association. NWS offices highlight rip current risks through surf zone forecasts and coastal hazard messages.

To better anticipate and monitor rip current hazards, the NWS Jacksonville, FL, office joined several other forecast offices early last summer in a rip current monitoring program, developed by the NWS Meteorological Development Lab.

The program is designed to reduce rip current deaths through improved situational awareness and forecasting and supports NWS's Weather-Ready Nation initiative by providing better information for decision making.

On February 28, NWS Jacksonville presented the American Red Cross Lifesaving Corps and the Jacksonville Beach Ocean Rescue Lifeguards, which serve Jacksonville Beach, with certificates of appreciation for the work they are doing to provide rip current reports to help enhance beach safety.

"The information they provide helps our staff not only validate and assess rip current risk," said NWS Jacksonville Forecaster **Andrew Shashy**, "but also provides surf height information and characteristics of long-shore currents which are important contributors to rip current frequency and strength."

Are You Weather and Climate Ready?

Ron Gird, NWS Education Manager, and Peg Steffen, Bruce Moravchik, NSTA

NOAA's array of observing systems provides historical and real-time scientific data to study the Earth's processes and interactions. These resources include primary data in physical, Earth and biological sciences along with video and lesson ideas for educators. Some key sites for educators and their students include the following

- NOAA Weather Service
- NOAA Climate
- NOAA Education
- Data in the Classroom

As a starting point, educators may want to download *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*, which identifies science and engineering practices mirroring NOAA's critical weather and climate information.

For high school students, lesson plans include:

- Do You Want to Risk It? Natural Hazards Assessment; Hurricanes, Images of Katrina—Hurricane Damage Assessment
- Keep Your Eye on the Sky: Clouds and Weather
- Do You Need a Map? Marine Navigation Using Real-Time Oceanographic and Meteorological Data
- National Ocean Service's (NOS) Education Library real-world data and analysis tools.
- NWS JetStream: Online School offering basic meteorology

Students learn about weather safety playing an online game from PLAN!T

- DataStreme Atmosphere: easy introduction to weather and climate.

In addition, the NOS and National Science Teachers Association Learning Center offer interactive sites and lesson plans about weather prediction, global climate patterns, and circulation patterns.

For upper-elementary and middle school students, PLAN!T NOW (P!N), has created the Young Meteorologist Program (YMP), a digital game based on the NWS Owlie Skywarn character. This project was done partnership with NOAA, the American Meteorological Society, and Midland Radio Corporation.

This game teach students about the dangers of severe storms and how they can stay safe before, during, and after a severe weather event. NOAA now offers a library of environmental online games.

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