



Aware

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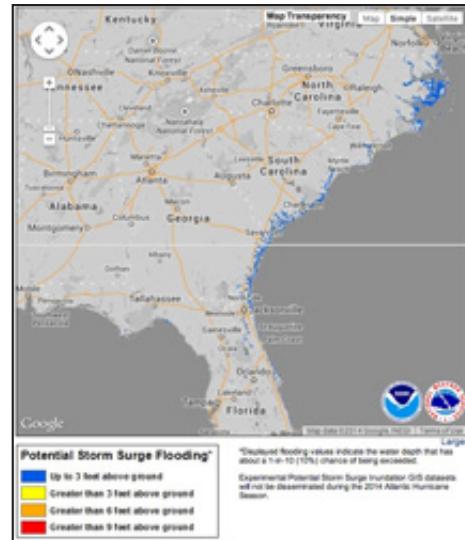
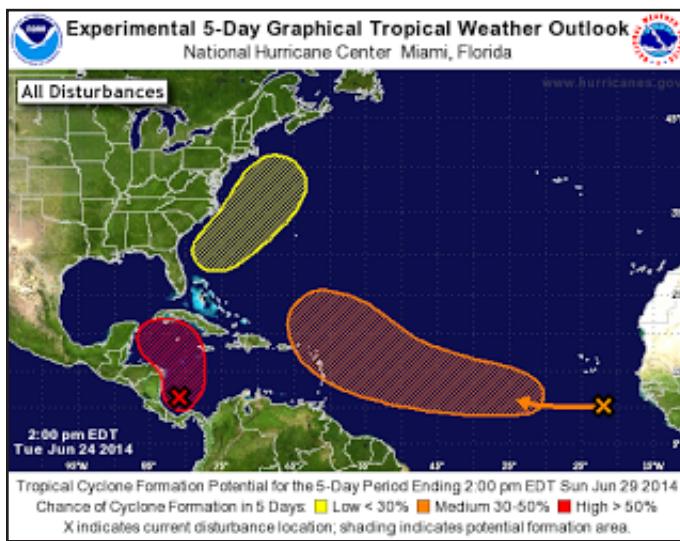
August 2014

News and Updates: National Hurricane Center Debuts New Products

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

On July 1, the NWS [National Hurricane Center website](#) (NHC) introduced two highly-anticipated experimental products: The 5-day graphical tropical weather (below, left) outlook accompanies the text Tropical Weather Outlook. The graphical outlook, available for both the Atlantic and eastern North Pacific basins, shows the formation potential of current and future disturbances for the next 5 days. Shaded areas represent the potential tropical cyclone formation areas and are color-coded by development likelihood.

That same day, as a strengthening Tropical Storm Arthur took aim at the North Carolina coastline, NHC also issued its first potential storm surge flooding map. The interactive map, updated with each complete advisory package, shows areas where inundation from storm surge could occur and how high above ground the water could reach in those areas. National and local media outlets used these maps extensively during Hurricane Arthur.



News and Updates: Aviation Weather Center Moving to Updated Forecast Formats

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

The NWS Aviation Weather Center has begun transitioning select Area Forecast aviation weather products to digital and graphical formats for easier interpretation and dissemination, as well as to provide more-detailed information.

The Area Forecast is an abbreviated, plain-language forecast that discusses specified weather phenomena, covering a geographical area designated by the Federal Aviation Administration (FAA). The Area Forecast is used to determine en-route weather and to estimate conditions at airports without Terminal Aerodrome Forecasts (TAFs). NWS provides TAFs for more than 600 airport terminals across the country.

The Area Forecast was originally developed in the 1930s. By design, it limits the character count and does not cover Instrument Flight Rule conditions covered by AIRMETs and SIGMETs. The Area Forecast covers a large

geographical area, typically several states, and is only issued 3-4 times daily for an 18-hour period. These specifications tend to produce broad forecasts with little detail and so are of limited overall value. This product met aviation weather information needs for many years, but NWS now provides a number of better alternatives.

"The limits of content and lack of ability to highlight certain hazardous weather in the old Area Forecast can result in poor situational awareness among pilots," said Bob Maxson, AWC Director and a former Hurricane Hunter pilot. "We need to create better and more effective decision support tools that provide aviators with higher resolution and more accurate predictions of anticipated in-flight weather conditions."

The FAA has recommended NWS transition six Area Forecasts in the contiguous United States and one Area Forecast covering Hawaii to digital and graphical alternatives. At this time, NWS will not make changes to Area Forecasts covering Alaska, the Caribbean and the Gulf of Mexico. Existing potential alternatives to the Area Forecast include, but are not limited to:

- ◆ Surface weather analyses and prognostic charts
- ◆ Public forecast discussions
- ◆ Significant Weather charts
- ◆ NWS National Digital Forecast Database
- ◆ Terminal Aerodrome Forecasts

Jointly, these products provide information similar to that found in the Area Forecast, in higher resolution and with vital graphical depictions. The FAA will conduct a formal Safety Risk Assessment as part of its Safety Management System before the transition takes place. Public input will be sought before any action to terminate the existing Area Forecast products. The assessment will offer guidance in proper use of proposed alternatives. NWS will seek public input before terminating the existing Area Forecast products. NWS and the FAA plan to complete the transition by early 2015.

Decision Support: Exercise: TExercise Helps Partners Plan for Special Evacuation

By [Barry Goldsmith](#), WCM, NWS Brownsville, TX

How would thousands of unaccompanied women and children from Central America, currently detained at facilities across the Rio Grande Valley, move to safety if a large and potentially catastrophic hurricane were to bear down on the region?

On July 23, 2014, the Department of Homeland Security/U.S. Customs and Border Protection, Rio Grande Valley Sector, conducted a Hurricane Detainee Evacuation Tabletop Exercise in McAllen, TX, to try to get answers. The exercise consisted of four scenarios with two fictional hurricanes.

The first three scenarios considered fictional Hurricane Duff, a western Atlantic and Gulf of Mexico cyclone modeled after the Rio Grande Valley Labor Day Hurricane of 1933, which caused significant wind damage, widespread storm surge and flooding.

The second scenario was for a meandering disturbance in the southwest Gulf of Mexico (Bay of Campeche) that rapidly intensifies into large, intense fictional Hurricane Xena before making landfall along the U.S./Mexico border. This scenario was based loosely on Hurricane Bret, which strengthened rapidly to a Category 4 cyclone east of the Rio Grande Valley before making landfall on the King Ranch in Kenedy County.

To begin each scenario, Warning Coordination Meteorologist (WCM) Barry Goldsmith briefed an audience of more than 100 decision makers on the forecast track/intensity, confidence in the forecast, and potential impacts from wind, storm surge and rainfall flooding. On longer time scales, briefings focused on broader negative cyclone impacts to aid decision makers with resource allocation and movement.



WCM Barry Goldsmith briefs federal, state, and local EM partners on potential impacts from a fictional hurricane as part of an evacuation exercise in McAllen.

On shorter time scales, briefings looked at potential impacts from wind, storm surge and rainfall flooding to help decision makers determine how quickly and whether to evacuate or shelter-in-place detainees.

Following each briefing, the exercise participants discussed the actions needed to ensure the safety of the unaccompanied persons, whether evacuating from the valley or staying put. Briefing slides were jointly prepared by Hurricane Liaison Team Manager Matthew Green, at the NHC in Miami, and NWS Emergency Response Meteorologist/Southern Region Operational Center Team Lead Jennifer McNatt in Fort Worth.

During the detailed, shorter time-scale briefings, Goldsmith focused on the importance of knowing where the detention facilities were located relative to poor drainage areas. This knowledge was vital because low lying areas could be temporarily inaccessible if several feet of water covered nearby roads. Goldsmith also advised that facilities, particularly those in Hidalgo County, be evaluated for structural integrity to ensure they can stand up to hurricane force winds.

"Trusted relationships among NWS Brownsville/Rio Grande Valley and core Emergency Management Partners must be cultivated to thrive," said Goldsmith. "Exercises like these are golden opportunities to deepen trust and ensure a coordinated team effort will succeed in protecting these unaccompanied women and children should a real, potentially devastating hurricane threaten." Participating organizations included:

- ◆ U.S. Customs and Border Protection, Rio Grande Valley to El Paso Sector
- ◆ Department of Homeland Security, Federal Emergency Management Agency Region VI
- ◆ Department of Homeland Security, Immigration and Customs Enforcement
- ◆ Department of Health and Human Services
- ◆ U.S. Marshals Service
- ◆ U.S. Coast Guard
- ◆ Department of Defense, U.S. Northern Command
- ◆ U.S. Transportation Command; Defense Coordinating Officer
- ◆ Texas Department of Emergency Management
- ◆ Cameron and Hidalgo County Emergency Management
- ◆ Cities of Brownsville, McAllen, and Weslaco/Donna Emergency Management

Decision Support: Exercise: Train Derails Causing Massive Crude Oil Flow

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

More than 150 local, state and federal officials took part in a hazardous materials exercise hosted by the North Dakota Department of Emergency Services (NDDES) either on site or remotely. Governor Jack Dalrymple requested the test and review of the state's emergency preparedness. The test simulated train derailments in Bismarck and Fargo with subsequent explosions and fires in train cars carrying Bakken crude oil. NWS Emergency Response Specialist Corey King ran the derailment scenarios through the Hybrid Single Particle Lagrangian Integrated Trajectory Model and provided the model output for use in the exercise.

"The plume model output was critical in helping create a realistic scenario" said Larry Regorrah, training and exercise specialist with NDDES.

During the exercise, NWS Bismarck Meteorologist-in-Charge Jeff Savadel and WCM John Paul Martin worked in breakout groups with other officials to discuss preparedness activities. The groups were separated into three mission areas: health and medical services, warning and information, and administration. The exercise helped identify current gaps in resources and capabilities based on the scenario.

During the exercise, NWS issued an actual Tornado Watch that included parts of southern North Dakota. Gov. Dalrymple monitored thunderstorm development. Martin discussed weather radar and other NWS services with the Governor, who said he valued the information and would try to visit NWS Bismarck in the near future.



North Dakota Governor Jack Dalrymple, right, and NWS Bismarck WCM John Paul Martin, left of Gov. Dalrymple, were among the participants at the state's oil spill exercise.

Outreach Innovation: State Parks Target Safety with StormReady, Ambassador Programs

By Michigan Department of Natural Resources staff, submitted by WCM, [Rich Pollman](#), NWS Detroit, MI

When a severe thunderstorm capable of producing damaging hail and 60-mph winds rolled through Yankee Springs State Recreation Area in Michigan on a hot and humid Sunday afternoon in late July, park rangers faced a daunting task: the safety of the hundreds of visitors enjoying the park's campgrounds, picnic areas and lakes.

After rangers had directed visitors to storm shelters, checked on the welfare of campers, avoided trees that were toppled by the wind, and assessed other damage to the park, the weather calmed.

According to the park's manager, the happy ending can be largely attributed to the NWS StormReady program—a voluntary initiative that helps emergency managers and community leaders strengthen local safety and preparedness measures by ensuring they have the latest technology and communication tools (such as weather radios, emergency sirens and public address systems) in place to deal with sudden severe weather events.

"We are in the process of applying for StormReady recognition so we had the action plan and equipment in place that helped our staff handle the weather event in an organized manner," said Park Manager Andru Jevicks.

"Before the storm hit, our rangers got out into the campgrounds, picnic and beach areas, and boat launches to tell people where to take cover should a warning be issued, and it all went very smoothly," Jevicks added. "This is not something you do on the fly. Being StormReady helps a lot."

In Michigan, 17 state parks are StormReady, with Yankee Springs expected to soon join the ranks. There are more than 2,200 StormReady sites in the United States.

"With millions of visitors coming to our parks each summer, we decided to take a proactive approach to weather safety and developed a partnership with the National Weather Service," said Michael Evanoff, safety officer with the Michigan Department of Natural Resources Parks and Recreation Division.

"Michigan weather can be calm and tranquil -- perfect for enjoying our many state parks, but it also can become severe and dangerous rather quickly," said Richard Pollman, WCM, NWS Detroit/Pontiac. "Being prepared is key," Pollman added, "and Michigan state parks have taken significant steps toward preparedness through this partnership with the National Weather Service."

To be recognized as StormReady, parks must have a system in place to monitor the weather, receive weather alerts, and alert employees and visitors. Michigan's StormReady state parks have also developed formal hazardous weather plans, which include training staff as weather spotters and holding emergency practice exercises.

Visitors to StormReady parks are encouraged to stay alert to weather conditions and their surroundings should they need to seek shelter while out hiking, boating or otherwise enjoying the outdoors. Campers and other park visitors are encouraged to stay informed by carrying a NOAA Weather Radio. These radios are available in portable, battery-operated models.

"Modern technology is a wonderful thing," said Tim Anderson, who volunteers as a campground host at Bay City State Recreation Area -- the first Michigan state park to attain StormReady status and only the third recognized park in the nation. "I use weather apps on my cell phone to keep informed of changing weather conditions. With the push of a button, I can access current weather forecasts as well as radar," Anderson said. "It provides me with real-time data to help plan visitor activities and warn visitors of approaching storms."

In recognition of the DNR's Parks and Recreation Division's commitment to attaining StormReady recognition for individual parks, NOAA recently named the Division a Weather-Ready Nation Ambassador - an initiative that formally recognizes organizations that have partnered with NOAA to strengthen national resilience against extreme weather, through such efforts as becoming StormReady. Learn more about the [StormReady](#) and [Weather-Ready Nation](#) programs online.

Aware

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