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.

May 2020

Register for Webinars on Proposed Changes to Watch/Warning/Advisory System

By Kevin M. Smith, Meteorologist, NWS Pocatello, ID

Over the past 6 years, the NWS Hazard Simplification (Haz Simp) Project has engaged with forecasters, core partners, and other stakeholders to explore possible improvements to the NWS Watch, Warning, and Advisory (WWA) system. This research found that users believe there were too many WWA products, message formats were inconsistent, and WWA headlines could be confusing. In particular, the "Advisory" headline was found to be widely misunderstood and confused with "Watch."

Based on these results, the Haz Simp Team is excited to share our proposal to streamline and simplify the WWA system. All NWS partners (including but not limited to emergency managers, media and other private sector partners, first responders, DOT personnel, water managers, and other federal, state, and local government and tribal officials) are invited to attend Partner Webinars to learn about the proposed changes and offer feedback. There are five opportunities to attend the webinar, each with the same presentation:

- 2 PM EDT, Wednesday, June 3, 2020: Register Now
- 12 PM EDT, Thursday, June 4, 2020: Register Now
- 1 PM EDT, Wednesday, June 17, 2020: Register Now
- 11 AM EDT, Thursday, July 9, 2020 Register Now
- 12 PM EDT, Thursday, July 23, 2020: Register Now

The proposed changes have not been finalized. Our decision will be heavily based on user feedback, which makes your participation so important. To learn more now, you can download a 1 page handout about the proposed changes. **Make your voice heard and attend a webinar!**

For more information on the Haz Simp Project, please visit the Haz Simp website. Send questions, concerns, and other feedback to hazsimp@noaa.gov.

National Service Assessment Released on 2018 Hurricanes Florence and Michael

*By **Mike.Sowko@noaa.gov,** Acting Performance and Evaluations Branch Chief and **Patricia.Brown@noaa.gov**, Service Assessment Program Leader*

Hurricane Florence was a destructive hurricane that produced historic flooding in parts of North and South Carolina. Hurricane Florence made landfall on September 14, 2018, near Wrightsville Beach, NC, at Category 1 intensity. Florence had weakened over the Atlantic Ocean from Category 4 intensity 4 days earlier. In a 7-day period, the hurricane caused widespread, catastrophic flooding. Many areas received 15 to 35 inches of rainfall.

Hurricane Florence at landfall, 7:15 am, EDT September 14, 2018

A peak accumulation of 35.93 inches gave Hurricane Florence the dubious honor of producing the most rainfall on record from a tropical cyclone in North Carolina. Damages were estimated at over $24.2 billion.

In that same year, Hurricane Michael, a catastrophic hurricane, produced historic storm surge and wind damage across parts of Florida, Alabama and Georgia. Hurricane Michael made landfall on October 10, 2018, near Mexico Beach, FL, at Category 5 intensity. The peak winds of 160 mph were the fourth highest on record for a hurricane striking the continental United States (CONUS) and strongest from a hurricane making landfall within CONUS since Hurricane Andrew in 1992. Damages were estimated at over $25 billion.

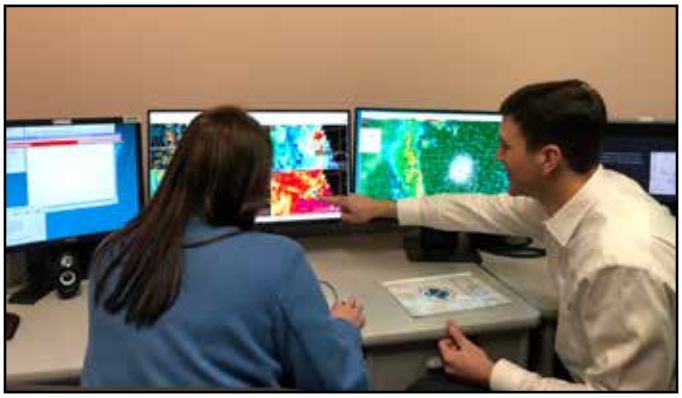
Because of the highly significant impacts of these two intense hurricanes, the NWS formed a team to evaluate its performance before and during these hurricanes. The findings, recommendations, and best practices from this report will be instrumental in improving the quality of operational products and services and will enhance the National Weather Service's public education and awareness materials related to flooding and other tropical cyclone hazards. The Service Assessment is now online.

Media Sits in Hot Seat for Weather Event

*By **James Morrow**, Executive Officer, Silver Spring, MD (formerly Meteorologist, NWS Raleigh, NC)*

Over the past few months, meteorologists at the NWS Raleigh, NC, hosted several groups of local broadcast meteorologists in a weather event simulation. The simulation put media reps in the hot seat for a high-impact severe weather event impacting central North Carolina in April 2018.

During the simulation, participants saw how our equipment and decision-making processes work and got a crash-course in severe weather warning methodology. Each local media meteorologist was asked to analyze real-time environmental datasets, make warning decisions, and draw and issue severe thunderstorm and tornado warning polygons within the simulated environment. This process included several decision points and incorporated spotter reports, collaboration, simulated phone calls, and impact based decision support.



WRAL Meteorologists Aimee Wilmoth and Zach Maloch identify a tornado debris signature during the media Weather Event Simulation (WES) and discuss possible Tornado Warning updates/upgrades.

Eleven meteorologists from four local stations in the Raleigh and Greensboro, NC, media markets took part. The event was the April 15, 2018, EF-2 Tornado within the city limits of Greensboro, NC. The roughly 2-hour simulation required NWS Raleigh to issue numerous

severe thunderstorm warnings along with a series of tornado warnings, which required different impact-based warning decisions. This simulation allowed for both the broadcast and WFO meteorologists to discuss the use of tornado tags in a severe thunderstorm warning, the different levels of a tornado warning, and to share severe weather identification methodologies.

This event received rave reviews from the broadcast meteorologist participants, helping to further cement the already strong relationship between the local media and the WFO. It is our hope that the broadcast meteorologists came away with an in-depth look into our warning decision process, which should strengthen their ability to communicate weather warnings and their associated hazards during future severe weather events. We'd like to thank the participants and other WFOs that have conducted similar media Weather Event Simulations in the past for their ideas and resources, including our backup office NWS Blacksburg, VA.

Improving Landslide Decision Support Services

*By **Audrey Rubel**, Physical Scientist, Alaska Region Headquarters, Anchorage, AK*

Aaron Jacobs, WFO Juneau Senior Service Hydrologist (left), works with partners to determine optimal locations for sensor placement.

NWS staff in Alaska are partnering to help keep people safe from landslides in Sitka. Landslides are a common phenomenon in southeast Alaska's temperate rainforest. In Sitka, three people were killed on August 18, 2015, when a landslide destroyed a home and heavily damaged another. That same day, three other landslides occurred on Sitka's road system and the U.S. Forest Service estimated about 40 landslides occurred in the Sitka Ranger District. Unfortunately, Sitka's landslide history is rich.

In September 2015, a geo task force of federal, state, local and tribal agencies was formed to address the problem. The team outlined what would be needed to improve landslide risk assessment and monitoring. A framework was developed and in 2018, a 3-year grant was awarded to develop a landslide warning system and communicate landslide risks.

In the fall of 2019, Senior Service Hydrologist Aaron Jacobs worked with the Sitka Sounds Science Center (SSSC), a WRN Ambassador, to help deploy a mesonet of 10 low-cost rain gauges. These rain gauges are part of a citizens' science program associated with the grant for community involvement. Crane Johnson, APRFC Service Coordination Hydrologist, worked with Stillwater Technologies LLC under a Cooperative Research and Development Agreement to modify the previously developed river gage (iGage) into a rapidly deployable and globally connected rain gauge. The SSSC deployed five of these rain gauges with five more planned this spring.

Data from these sensors and others being deployed by partners including the U.S. Geological Survey, the University of Oregon and the Alaska Division Geological and Geophysical Surveys will help inform emergency managers when conditions are approaching levels that might be associated with debris flows.

Forecasters at WFO Juneau will maintain situational awareness of rainfall and issue statements when thresholds exceed safe levels. Determining those optimal thresholds remains an active topic of investigation.

Aware

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Managing Editor: ***Melody Magnus,*** Editors: ***Mark Tew, Rich Bandy***
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