Aware

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July 2014

News and Updates: Comments Wanted on Proposed TsunamiReady Guidelines

*By Christa Rabenold and **Rocky Lopes**, NWS Tsunami Program, Silver Spring, MD*

Since 2001, the NWS TsunamiReady Program has helped reduce tsunami risk through better planning, education and awareness. As of mid July, there were 174 TsunamiReady sites in the United States, U.S. territories and on U.S. Military bases abroad. In those 13 years, the world has witnessed a number of catastrophic tsunamis and the field of emergency management has evolved. To reflect these changes and new information about tsunami hazards, NWS is updating its TsunamiReady Guidelines.

TsunamiReady and StormReady recognition ceremony at Naval Base Coronado, CA, in June 2014.

In 2010, at the urging of the National Tsunami Hazard Mitigation Program (NTHMP) Coordinating Committee, NWS funded a multiyear social science project to review the guidelines and propose updates.

To refine the draft guidelines, researchers worked with a series of focus groups that included emergency managers (EM) and community stakeholders in tsunami risk areas. Based on the findings from the focus groups and collaboration with the NOAA Tsunami Program, NWS Weather Forecast Offices and the NTHMP, the team developed its proposed guidelines.

The most notable of the changes is an updated format that better aligns with the 4-part framework EMs typically use to organize their work: preparedness, mitigation, response and recovery. The proposed guidelines also require communities to determine tsunami arrival time, inundation zone, population exposure and evacuation time in order to assess their ability to evacuate people to safety.

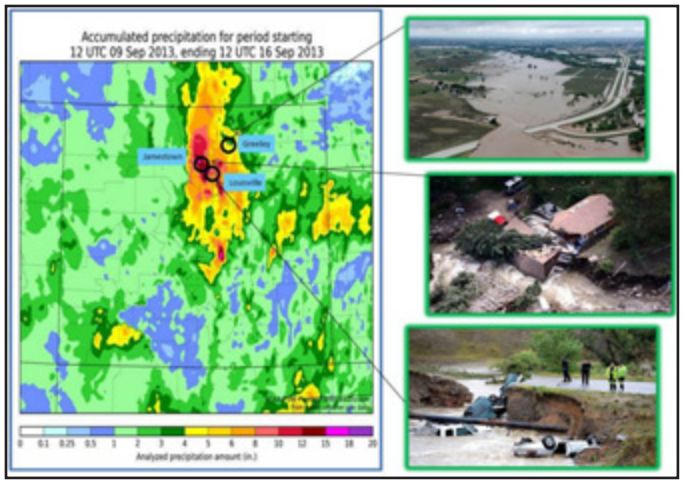
The goal of the project is to provide guidelines that are useful for all TsunamiReady Program partners, are achievable by coastal communities vulnerable to tsunamis and, most important, are effective at reducing tsunami risk along our coasts. The process is designed to be collaborative and transparent.

Comments are welcome and encouraged. Download the proposed guidelines and send feedback and questions to Rocky Lopes by August 15, 2014.

News and Updates: Colorado Floods Service Assessment Released

*By **Sal Romano**, NWS Service Assessment Meteorologist, Silver Spring, MD*

In late June, NWS posted the Record Front Range and Eastern Colorado Floods of September 11-17, 2013 Service Assessment. Eight people lost their lives as a direct result of this flooding. Most of these fatalities occurred during the height of flash floods on the evenings of September 11 and 12. Local authorities evacuated more than 18,000 people. In addition, there were approximately 19,000 homes and commercial buildings damaged with more



Left Image, map of event total rainfall for the period Sep. 9–16 (NOAA/ESRL); Right: River flooding on the South Platte River at Highway 34 near Greely, CO (Huffington Post.com); Flash flood damage in Jamestown, CO, along Left Hand Creek; (M. Leffingwell, Boulder Daily Camera); Flash Flood damage on Rock Creek at Dillon Road and Highway 287, Louisville, CO (M. Leffingwell, Boulder Daily Camera)

than 1,500 destroyed. Authorities estimate the flooding damaged or destroyed almost 485 miles of roads and 50 bridges in the impacted Colorado counties.

This event began on September 9 as a large, slow-moving upper-level circulation that became nearly stationary over the Great Basin of the southwest United States. The broad flow around this system pulled plumes of tropical moisture northward from the Pacific Ocean off the western coast of Mexico and the western Gulf of Mexico. A frontal system became stationary along the Front Range of the Rockies causing upslope easterly flow to become well established.

Three episodes of torrential rainfall struck the Front Range from Fort Collins southward to Colorado Springs and east to Denver and Aurora, CO. The most intense events occurred on the nights of September 11–12, and September 15.

Rainfall totals far exceeded existing records. In Boulder, 24-hour amounts exceeded 9 inches by the morning of September 12, nearly doubling the previous record. Event rainfall totals exceeded 17 inches in the climatologically favored upslope areas of the Front Range with a large area in eastern Colorado measuring 8–17 inches of precipitation.

As with all service assessments, NWS Performance Management staff will track all recommended service changes to ensure they are implemented as quickly as possible.

Decision Support: Search and Rescue Exercise Tests Mountain Area Readiness

By Faith Borden, WCM, NWS Charleston, WV

Hours and minutes are vital when a victim is lost in West Virginia's mountainous terrain. To be better prepared, meteorologists from NWS Charleston, WV, along with over 200 personnel representing state and local agencies, took part in West Virginia's 2014 Search and Rescue Exercise on May 3, 2014.

The simulated exercise, code-named "Operation Dog Way," involved air and ground operations taking part in search and recovery of satellite fragments that supposedly crashed in the southern Monongahela National Forest in the Allegheny Mountains.

The primary goal of the exercise was to test the interoperability of the multiple agencies responding—including the state police, state National Guard, state Division of Homeland Security and Emergency Management, Civil Air Patrol, U.S. Forest Service and multiple county and local search and rescue entities.

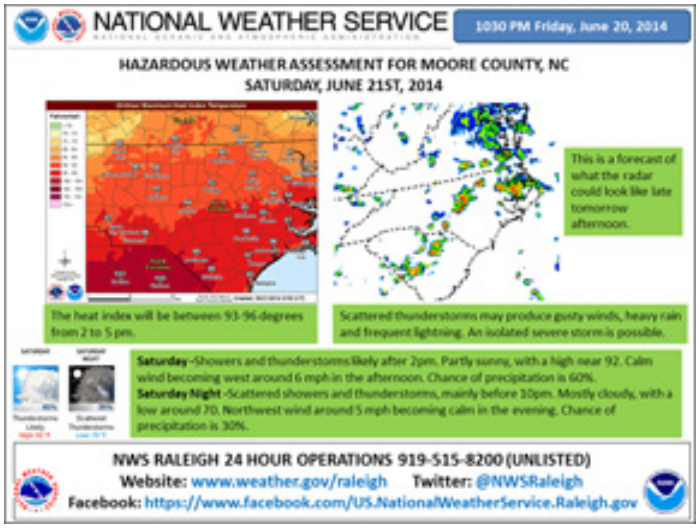
Greg Guillot gives a morning weather briefing at the command post.

Before the event, NWS meteorologists provided organizers with point and area forecasts. During the event, NWS staff worked at the Incident Command Post. Onsite NWS meteorologists Greg Guillot and Julia Ruthford provided morning and evening briefings, maintained a continuous weather watch, provided immediate notification of any significant changes to the ongoing forecast, and shared hourly weather observations to the Command Group. The exercise and NWS support was rated highly by evaluators.

Decision Support: NWS Provides Critical Decision Support to Emergency Managers During Historic U.S. Open

By Nick Petro, WCM, NWS Raleigh, NC

Pinehurst, NC, hosted both the 2014 Men's and Women's U.S. Open Golf Championships in back-to-back weeks. It marked the first time both tournaments were played in the same year, on the same course, in consecutive weeks. NWS Raleigh coordinated with Moore County Emergency Management to provide remote decision support.



An example of the daily briefings provided to Moore County Emergency Management

From Sunday evening June 8 through Sunday evening June 22, NWS Raleigh sent the Moore County Joint Operations Center (JOC) a daily weather hazards summary for the Pinehurst area. The summaries provided information on weather hazards expected the following day.

In addition, NWS Raleigh forecasters called the JOC commander when staff expected isolated strong to severe storms, substantial cloud-to-ground lightning or any other weather hazard in the vicinity in the next 10-20 minutes. Before the tournaments, NWS Raleigh developed a contingency plan to provide on-site decision support services if the office expected enhanced severe thunderstorm activity. Fortunately, the weather did not deteriorate to that extent during either of the U.S. Opens.

After the 2-weeks of golf events, Scot Brooks of Moore County Emergency Management wrote, "Thank you so very much for your timely and accurate weather briefings during the U.S. Open. Your valued assistance helped to provide a safe 2-week event for over 400 public safety officials and just over 50,000 spectators on peak days." WCM Nick Petro, who worked with Raleigh Senior Forecaster Brandon Locklear to coordinate the decision support, found the experience a valuable way to fine tune the NWS office's operations.

Decision Support: Ragin' Stagin' Tests Incident Command Effectiveness

By Vern Preston, WCM, NWS Pocatello, ID

Practice as you play was on display for the eight counties that make up northeast Idaho this spring. EMs from these counties along with Idaho Bureau of Homeland Security partnered with NWS and other agencies to set up a test Incident Command Camp. The team then evaluated readiness and equipment purchased over the years.

The "Ragin Stagin" exercise started as a tabletop with more than 35 agencies working together in a controlled setting. NWS Pocatello WCM Vernon Preston took part in the exercise hosted at the Idaho Transportation Department District 6 facilities. Vern also helped obtain Resource Orders so newly trained NWS Pocatello staff could join the functional exercise.

On June 6-7, at the Rexburg High School property, over 60 entities including sheriff offices, search and

NWS Pocatello weather briefing tent oniste at the "Ragin Stagin" functional exercise

rescue groups, fire departments, health districts, Idaho National Laboratory, school districts, Civil Air Patrol, amateur radio RACES/ARES groups, and NWS demonstrated their ability to set up an Incident Command System camp and perform vital functions related to a long duration disaster. NWS Pocatello Meteorologists John Keyes, Jeremy Schulz, Gary Wicklund and Travis Wyatt showed up with a resource order asking for the NWS to set up a briefing services tent. NWS staff checked in and were provided a special participant badge and then given orders to obtain a location within the developing camp to set up operations. After establishing their briefing location, NWS staff took parts in other positions in the camp including Staging Manager, Documentation Unit Leader, Demobilization Unit Leader, Faculties Unit Leader, Communications Unit Leader, and Financial staff.

Although this was a continuous 36-hour event, NWS onsite staff turned over weather support at 7 pm to forecasters at NWS Pocatello for the night. The public was invited to attend and see the resources that might be used during a disaster. NWS staff provided safety information and demonstrations. In addition, first responders provided mini-classes for the public.

NWS staff used recently completed ICS 300 and 400 residence classes to help organize the event and reduce confusion. Response to NWS support was excellent with several participants commenting that NWS staff were knowledgeable and provided vital information. The team is planning additional exercises and has already asked NWS Pocatello staff to help with planning.

Outreach Innovation: Record Crowds Drawn to Hurricane Conference

*By **Barry Goldsmith**, WCM, NWS Brownsville, TX*

More than 130 core partners of the NWS Brownsville/Rio Grande Valley Office took part in a 2-day conference to learn about the latest in tropical cyclone information from NWS staff, a University of Texas–Pan American (UTPA) speaker and a Weather Channel Hurricane Expert. The agenda, including links to each presentation, is **online**. The goals of the conference were to enhance trusted relationships between NWS Brownsville and its core partner groups and to help ensure the weather community speaks with one voice when a tropical cyclone threatens the area.

The conference included workshops for EMs that concentrated on the technical side of hurricanes. These EM sessions offered information on a new, experimental Spanish Language Hurricane Local Statement and a proposed impact graphic component. EMs also looked at the social side of hurricanes. Dr. William Donner of UTPA gave an overview of the new Disaster Studies Program, with a focus on research aimed at personal decision making before Hurricane Katrina and how such decisions might apply to highly vulnerable low-income populations including those in the Rio Grande Valley.

NWS Brownsville Science and Operations Officer Doug Butts described how social media is used to reach more people than ever before. He presented a short video user's guide to highlight the strong need for partners to join NWSChat.

The media workshop focused on impact-based services that will help the public better understand and respond to weather threats, whether they speak English or Spanish.

Spanish Language Outreach Coordinator Maria Torres introduced the new NWS Brownsville/Rio Grande Valley Spanish Language experimental products and the coming launch of the NOAA Weather Radio Spanish language transmitters, which will cover nearly all communities where Spanish is often the first language for listeners. Broadcasters particu-

Samara Cokinos, KRGV Channel 5 Weather/News, interviews NWS Brownsville/Rio Grande Valley Tropical Program Leader Justin Gibbs on the New Spanish Language Hurricane Local Statement.

larly appreciated NWS Brownsville providing critical hurricane threat and impact information in Spanish, without the need for a third party translator.

WCM Barry Goldsmith reviewed "More to the Story than the Category" as a lead-in for keynote speaker Meteorologist in Charge Dr. Steve Lyons, NWS San Angelo, TX, who wrapped up the conference. Lyons first presentation introduced a new way to communicate hurricane impacts beyond the Saffir–Simpson Hurricane Wind Scale. Lyons' method, "The Five Toes of a Hurricane Footprint," considers wind, rainfall flooding, seawater rise, waves and tornadoes as individual toes, with the size of the toe dependent on the unique personality of each cyclone. Lyons concluded with a discussion on how to reduce impacts from each of the five toes by strengthening and protecting buildings and other infrastructure. He urged listeners to consider not building in areas prone to rainfall flooding, sea water rise, or waves.

Outreach Innovation: Ground-breaking Video Presentation Connect East and West

*By **NWS News Staff**, Silver Spring, MD*

In late May, NWS Honolulu, HI, conducted a first-ever live video conference with a school in central Florida. NWS Honolulu Meteorologist Anthony Reynes and Lead Science Teacher George Bartuska, from Kathleen High School in Lakeland, FL, synchronized their schedules to run a day-long marathon of six remote presentations, involving about 100 students each.

As part of its Earth-Space Science Program, this event introduced these students to the basic weather patterns and hazards that affect the Hawaiian Islands and the basics of the geology and climatology of this unique and exotic location. Reynes described the experience as "a fantastic and exciting opportunity for reaching out to so many students, 5,000 miles away from Hawaii, and a 6 hour time-zone difference…. It definitely sits near the top of the list of amazing milestones we have accomplished in our ever-expanding Outreach and Multi-Media programs," he said.

The audio-visual setup included a combination of computers, cameras, and background displays in order to provide a rich audio-visual presentation for the students.

"My thinking is that the unique location of Hawaii will help generate interest among our students both in the presentation and the material being covered. We are exploring the idea of bringing a Hawaiian Weather/Earthquake monitoring facility to our school campus," said Bartuska.

This collaboration, suggested by WCM Daniel Noah, NWS Tampa Bay, provided a unique opportunity for spreading the message of awareness and preparedness against hazardous weather, especially during hurricane season, a key component in our goal of achieving a Weather-Ready Nation. The staff at NWS Honolulu would like to thank Dan for providing the initial contact that made this event possible.

NWS Honolulu Meteorologist Anthony Reynes

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